THE NEWSWEEKLY FOR THE COMPUTER COMMUNITY lune 6, 1983



#### DP Execs Ready, But Withholding Act Still Up in the Air By Paul Gillin

CW Staff

With the status of the Tax Equity and Fiscal Re sponsibility Act of 1982 changing faster than the odds in a game of five-card stud. DP managers are bods in a game or tree-card sud, DF managers are hedging their bets in favor of the bill's enactment. "We're absolutely, totally ready," said George DiNardo, senior vice-president of information man-agementi and research at Mellon Bank of Pittsburgh, Pa., reflecting the status of most DP executives recently interviewed by Computerworld

In fact, the executives have generally softened their opposition to the concept, which in part pa-quires financial institutions and corporations to withhold 10% of interest and dividend payments and pay those funds directly to the Internal Revenue Ser-

"Four years ago. I was down there [in Washington D.C.] testifying and doing my best to defeat [the mea sure]." DiNardo commented. "We're now of the position that the government did a fair job" of accommo-dating bankers' comments. "If the IRS is having the worst of difficulties capturing these funds, maybe it's time everybody gets on board in backing this kind of

program."

Nevertheless, the cost of preparing for Tefra has been high, largely because of the many adjustments made by the government since the bill was passed. In the hubbub of repeal measures and political jockeying that has surrounded the source, the government has failed to consider many of the circumment has failed to consider many of the circumstances that could force fine-tuning after Tefra is

enacted, according to managers. (Continued on Page 9)

The Senate is slated this week to take up a measure alwird some in state into tract to take up a measure at ready panced by the House that would repeal the "with-holding at the source" provision. Story, Page 9 66me us-ers are finding the reprogramming required to comply with the measure less painful than capacides chers are finding it the sensure less painful than capacides chers are finding it considerably more alficial. Page 8 of a number of software vendors have already delivered modifications to their beak-ing packages to comply with the regulation. Page 3

## Sperry Adds 1100/70 Series As 1100/60 Upgrade Path

by Ed Scannell
CW Staff
CW Sta nemory capacity of the 1100/60 systems, but bets 30% to 40% less. Sperry claimed. In addition to the 1100/70 introductions.

In addition to the 1100/10 into occurrenced:

• The formation of Sperry Credit Corp.;

thich will refer potential Sperry users to anks, other financial institutions and thirdbanks, other financial institutions and turni-party lessors from which, according to the firm, they can obtain lesses up to five years in term at less cost than if they leased the equipment directly from Sperry. The compa-ny estimated that customers will be able to save 10% to 15% by going through the credit

The Sperry 5055/Uniservo 26 and 28

Expected to compete against IBM's 434 line, the 1100/70 family of mainframes intro uced by Sperry today conduced by Sperty today consists of seven six Sie-processor and eight multiprocessor ma-chines that have performance razing sizes of the sizes of the sizes of the sizes to 2.6 millions of instruc-tions per second. 2.6 millions of instruc-tions per second or sizes of the rector of major systems. Thomas Flynn, the 100/75 are targeted at Fortune 1,000 com-putates in which. They will consist with Table multifuses such as the 5100 and 3083. It can store four times an unich data as compass-tion of the sizes of the sizes of the sizes for the sizes of the sizes of the sizes for the sizes of the sizes of the sizes (Contained or Page 6).

Stolen From Wells Fargo?

# Bank's Source Code Tapes Vanish

By Jeffry Beeler CW West Coast Burer SAN FRANCISCO reels of magnetic tape con-taining the source code for all of Wells Fargo Bank's major financial applications have mysteriously vanished in what appears to have been

a theft.
The media, which were capited from records in the bank's main tape library before being transferred to an employee's office, were lasseen on May 3. One day later, Wells Fargo security personnel discovered that the tapes were missing and notified their superiors.

Reports of the disappear-ance triggered a widespread security search of employee ess, and as of June 1, the

mained unknown.

Ruthors of the apparent tape theft began leaking from sources close to the bank about two weeks ago.

Confirmation of the reports inally came from an official Wells Fargo spokeswoman

on May 31.
Wells Fargo has apparently refrained thus far from reporting the loss of its tapes to

cies. "We're still trying to de termine in our own mind

#### User to Tie PBX, Local-Area Nets

By Bruce Hoare
CW Staff
ANAHEIM, Calif. — A
san at the Upjohn Co. is
roof that private branch exhanges and local-area netorks are coming together.
In a session at the 36th anusal International Commu-

CW at ICA

ations Association's annual conference continues or Pages 10-13.

pharmaceutical manufactur-er in the world, includes 18th buildings spread across a 25 mile radius in and around Kalamazoo, Mich. A year ago, the firm had. 3 local-ares networks, most of them

would be 45 independent networks by 1987.

Money was also a consid-eration. Miller claimed that if Upjohn sat back and did nothing, it would spend \$99 million on communications over the next few years. He said 25% of that sum would be directly related to AT&T's

TM reg U.S. Par. Off Editor John C. Whitma leg Editor Rits Sheet ree Editor Cheryl M. Gelb

Between their Compositional de Monte Chair drove Barne Money, by 7 DF Phone (MR 1) 1 100-107 Teles, UTVMD on Hanner of The

#### For IBM Processors

# Xerox Unveils Info Center Support

By Robert Batt
CW West Coast Bureau
LOS ANGELES — Introducing
what it termed its "second-generainformation center," Xerox tion information center," Xerox Computer Services here, a division of Xerox Corp., has announced five IBM-compatible software packages. The packages run on IBM 370, 30 series and 4300 processors in SSX, VSE, VSI, MVS and VM operating environments with either Biam or Vtam. The five norkness inchares included. tion information center,"

ronments with either Blam or Vian.
The five packages include:

• Reporter II. a report/query program generator that reportedly uses interactive dialogue to enable users to specify the content. Format and layout of reports. It can either form part of a major system or be used to generate report programs and que-

ries, which operate in a private sub-system to accommodate custom ap-• Filer II, a structured progra

ming language using interactive dia logue to enable users to enter state ments about data processing work to be performed. The product can be used by systems analysts and proammers to write standard pro-ams with statements and compiled

programs stored in a program library ile, Xerox said.

Definer II, designed to allow us ers to define data base contents, for-mat of records and data elements within records. Definer fl reportedly specifies data bases for new applica-tions and modifies and maintains the

White House Proposes Grouping NBS With NSF

WASHINGTON, D.C. — The Na-onal Bureau of Standards (NBS), ow part of the Commerce Depart-nent, will become attached to the ational Science Foundation (NSF)

House last week. In releasing details of its trade reorganization plan, the While House 
also proposed keeping the National Telecommunications and Information Administration grouped with 
the major Commerce units. Those 
units would be merged with the 
units would be merged with the 
units would be merged with the 
tality's Office in one organization, 
the idea being to merge the policy 
units functions of the trade representative with policy implementasentative with policy implementasentative with policy implementa-tion activities now carried out by the

SOFTWARE & SERVICES

bilis originating in Congress, which are slightly different from the adare signity director from the ad-ministration proposal, continue to advance. Evidently in response to the aubstance of those alternative blueprinti, the White House has streamlined its reorganization plan and recommended shifting a number of current Commerce agencies to

of current Commerce agencies to other Cabinet departments. Proponents of a so-called "lean-and-mean" trade department argue it must be relatively small to be respon-sive to the changing needs of domes-tic and international business. Additionally, responding to complaints that the Trade Representative's policymaking expertise might be lost if it is shuffled into the new trade agen-cy, the White House now proposes to keep that office's functions intact as a

such support system for nontecnnical business professionals making finan-cial management plans. The package is said to allow users to perform bud-geting, financial consolidations and the modeling, manipulating and analysis of numeric information. It is documented on-line with Help state-

analysis of numeric information. It is mention for each prompt.

• Control Strategist, designed to calculate the control strategist, designed to calculate the control strategist, designed to calculate calculate the control strategist, designed to the control strategist can be seen a strategist can be seen as the control strategist can be control to the control strategist can be controlled to the control can be controlled to the control can be cont

converse package permit the compatible permit decompatible permit and compatible permit deintelligent terminals addressing a ministrate companie. The data can be extracted from business files in the permit design of the permit design of the production of p

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deanwhile, trade department larger Department	nter for the new, ed from 7899 La Tijera Blvd., Li t of Tradé. geles, Calif. 90045.
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IN DEPTH Data Base Machines	TSI Offers Custom Dictionary Facility Option  1ARC-Custry' Series Bows  Version II of 'First' Out for Series/1
NEWS	COMMUNICATIONS .
System/SE Looking Good to System/SH Libert 5 LAA 10 P Stop Close to Desking With Ready 8 Felts Complance Easy for Some, Need for Others 8 Congress Something to Reach Teles Accord 9 ECA Product Introductions Sport the Sportnum 10 Libert CH Tells Not Avoided More Choice 11 Libert CH Tells Not Avoided More Choice 11 ATAT Ease Product of System Products 12 ATAT Ease Product of System Products 15 BI Chief Three World, Europ Store Interests 15 Survey Shows Black 3 VM Gaining on NVS 5 Surve	Two-Way Transmission Seen in Wage
Minn. Shuta Down Pyramid Sales Scheme	Pen Plotter Out for IBM Clusters
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Fully Automated Gas Stations Open	Rolm Unwells DEC VT100-Like Terminal
EDITORIAL.	Some NCC Vendors Still Hot
Editoriat Track Criminals, Not Workers	VM Software's Chief Paints Optimistic Future

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porate information from ADR/DATACOM System data bases or conventional files.

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#### ADR/IDEAL\* for applications develope

This state-of-the-art application development and execution system allows end users to write their own applications to satisfy their information needs. It significantly improves productivity, reduces development and maintenance costs, and enhances the reliability of applications.

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ROSCOE's Extended Time-Sharing Option supports a wide range of IBM and non-IBM interactive applications. ROSCOE consistently maintains excellent response time

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The one vendor system software solution

# Tapes With Wells Fargo Source Code Vanish

(Continued from Page I) spokeswoman said. All the vendor-developed programs are believed to

developed programs are ownered be proprietary.

Whether the confidentiality of the companies' proprietary programs has been compromised and whether Wells Fargo will face any legal liability as a result of the recent tape discountry. ity as a result of the recent tape dis-appearance has yet to be determined. A Wells Fargo apokeswoman, how-ever, discounted the possibility of le-gal action against the bank, primarily "because the disclosure— if there was any — came without our autho-

In addition to the vandor-sup-plied software, the six missing tapes reportedly contain the source code for all the applications developed by Wella Fargo'a own internal program-ming staff. Some of those applica-tions are said to include demand the posit accounting, savings, general edger and automated teller machine

#### Impact on Wells Fargo?

Opinions vary widely on the que argo's source code tapes is likely to ffect the bank's business operations

and financial health.

One source sees the apparent tage theff as potentially harmful, especially and the sees of the sees of

the same services.

Humphries' shoughts were echoed by a second individual who still
works for Wells Fargo. "The main
risk [that the tape disappearance
poses for Wells Fargo] is that a competitor could observe how the bank

#### Tapes Left in Plain View for Several Days

SAN FRANCISCO - Wells Fargo Bank'a recent loss of six valu-go Bank'a recent loss of six valu-go Bank'a recent loss of six valu-go Bank'a recent loss of six valu-resulted, in part, from a breach of the institution'a own internal se-

arity procedures.

The tapes inexplicably disapeared in early May after sitting peared in early May after sitting in plain view on or near an employer's desk for several days. Such prolonged exposure in an open, unsecured area would appear to violate a standing Wells Fargo security rule requiring all unused tapes to be kept either in the bank's source code library or in a locked enclosure.

in a locked enclosure.

Another security violation apparently occurred at about the same time the tapes were removed from their usual holding area without the appropriate management authorization.

Wells Fargo requires its em-oyees to sign a checkout form fore they transfer source code from the bank's tape library to an unsecured work area.

unsecured work area.

That simple precaution, however, was apparently circumvented in the case involving the six tapes that were recently discovered to be missing. Reports of the purported securi-

ty violations were first circulated by unofficial but well-informed sources inside or close to Wells Fargo. The rumors were then offi-cially confirmed last week by one

cially confirmed last week by one of the bank's press laison officers. Both violations of Wells Fargo's security guidelines appear to have been traced to one of three product managers in the bank's quality assurance department. That manager reportedly asked that the bank's application source code be copied onto magnetic tape and then be removed from the organition's main program library.

Although the manager was au-

thorized to use the six source code tapes, she obtained them without signing the required checkout documents, a Wells Fargo apokes-woman confirmed last week. The spokeswoman also confirmed re ports that the tapes were sitting unsecured in the product manag-er's office for several days before

they disappeared.
"She (the product manager)
really shouldn't have kept them out in the open for such a long time," the spokeswoman said. The product manager could not be reached last week to comment on the purported security violations.

Wells Fargo security officers, who reportely had been leeping who reportely had been leeping who reportely had been leeping who reported had been leeping to the second of the same proposed to the same proposed in the second of the same proposed in the same proposed in the second of the same proposed in the same proposed in

Pretty Ias.

"I was talking to some people in the main lobby a few days after the tapes were taken." the source recalled, "when I saw a guy walk out the front door with a reel of tape under his arm. No one ever challenged him."

six spare tapes and moved to another location, an employee intentionally or unintentionally omitted the pro-grams' copy library numbers, that writes its code and estimate roughly develop and introduce a new cus-tomer service," the individual said. "So a potential rival might be able to rush a new product to the market be-

grams copy interry numbers, employee said.
Copy library numbers reportedly provide a means of readily retrieving record layouts, screen formats and re Wella Fargo." But another of the bank's current mployees downplayed the possible apact of the tape loss on Wells Far 'a ability to make money. When

grammers need to run certain Cobol programs. Without the copy library numbers and their corresponding routines, an unauthorized user of Welts Engo's source code tapes would find itself unable to entil yer construct or recomplic the bank's applications, two current employees said.

#### User to Tie PBX, Local Nets he contents of the bank's applica-ion source code pool were copied to

(Continued from Page 1) corporate network plan he described will cost only \$12 million, not in-

will cost only \$12 million, not in-cluding labor costs.

Although the plan intends to sort out the local-area network tangle, it is alated to do so without forcing the company to dismember completely the IBM 3270 coaxial cable networks currently in place. "It is very viable for us to tell people to hang on to their equipment." Miller said.

their equipment," Miller said.

That equipment includes 7,200
telephones, 1,500 data terminals (a
number that will soon double) and
50 facsimile terminals. There are approximately 100 Xerox Corp, Model
\$60s, \$50s, \$20s and \$810 Stars. Miller expects to have three times as many Xerox devices soo

many Kern devices soon.
The pian calls for a PEX or PEXs from Intercent. Inc., Northern Telston Intercent. Inc., Northern Telston Intercent. Inc., Northern Telston Intercent. Inc., Northern Telston Intercent. Intercent Interce

nies as Southern New England Bell and Cincinnati Bell in offering to provide and maintain non-Bell

provide and manusam couplement upgraded upgraded

On the community level, remote locations will be tied together through T1 (1.5M bit/sec) microwave links and, in cases where microwave is unusable because of line-of-sight problems, through fiber-optic cable. Some of the services expected to be transmitted include voice mail and

transmitted include votee mail and electronic mail.

Three of the four Etherness are currently linked, and the fourth one currently linked, and the fourth one point to be the real test. "Miller said, Part of the problem involves wing, as 13-floor building in downtown Aslamazoo with coaxial cable. Nonetheless, Miller referred to Ethernet as a de facto standard and said that the entire corporate network will be Ethernet-compatible.



IMS Data Communications
July 25—26......October 24—25 IMS Message Format Services July 27—28......October 26—27



#### Good Growth Path, Good Buy

# System/36 Looking Good to System/34 Users

By Tom Henkel

CW Saif

IBM appears to have won back the
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like a good buy to these users. they are already setting internal wheels in motion to buy a System 136. Others, where we see the good of the setting the setting the setting the setting they have a growth path. Soll indeers pointed out that the setting they have a growth path. Soll indeers pointed out that the part to IRR's larger System 136. The previous System 136. Seystem 136.

ading a System/34 to a System/38. Eller & Co. was seriously consider-gupgrading to a System/38 last are. But when conversion costs re included, the new machine uild have wound up costing more re month to operate than the exist-5 System/34, according to Round-e. In an unvertain economy, his npany was not willing to approve expense.

mpany was not willing to approve esperiments. Now Eller & Co. will probably or-er & System/Sb. by the end of the nar. The System/Sb. the substitute of the star The System of the System yout \$30,000 if IBM had announ-tie System/36 aix months earli-hat is how much it will cost to co ert between 700 and 1,000 Syste is programs to run on Goddess' ently acquired System/38, Jacobe

and. "I couldn't wait," Jacobson said.

'ii system had been overloaded for boots a year before the System/38vas brought in.
While he was disappointed that he will not be taking advantage of the yestem/36, Jacobson applauded the processor. "It's a great machine for.



#### Focuses on 'Saving Lives, Property'

# L.A.'s DP Shop Opts for Dealing With Reality

LOS ANCELES — A lot of thirgs happen here that strain the distinctions between fantasy and reality. Take the time wended! Meyer, Take the time wended! Meyer, manager of the Data Service Bureau for the city, played host in his data ocate to a movie crew and actor Tim Conway on roll and the Meyer and the control of the co LOS ANGELES - A lot of thi

edly recalled in a recent interview. Disruption, it became clear, is one thing the Los Angeles DP operation emphatically does not need. With re-sponsibility for police message switching and dispatching. fire and ambulance dispatching and Los An-geles harbor and striport data opera-tions. "the criticality of swing lives and property" makes Meyer's job unique edly recalled in a recent interview

"A few seconds makes a difference when you're dealing with a fire or an ambulance," he noted. "This is a real

The city has an IBM 3081 and 3033 for general-purpose computing; two IBM 4341s for police message switch-ing; four Digital Equipment Corp. PDP-11/70s for police dispatching; two PDP-11/23s for fire and amb nce dispatching; and one IBM 4341 sch for the Los Angeles Internation-Airport and the harbor. The shop "totally Systems Network Archi-

is "florally Systems receives a relative tecture," he noted.

The 350-employee DP shop serves about 40 departments comprising 26,000 people. By next year, personal computers may invade the territory, but until now, the Data Service Bureau has discouraged their use. Meyneau has discouraged their use.

er said, because there are no standard sterfaces yet. By July 1, there are ex-

pected to be 80 IBM Displaywriters installed in user departments. Within two years, the department expects to integrate data, text, image and voice using IBM's Document In-terchange Architecture and Docu-ment Content Architecture, Meyer

Other than the criticality of re-sponse time, Meyer's concerns are ponse time. Meyer's concerns are just like any large DP shop." he aid. His chief problems are keeping py must be aid. His chief problems are keeping must be aid. His chief problems are keeping must be aid. His chief problems are keeping with 25 systems programmers cur-ently on the staff. Meyer would like.

to see a few more. "It's not really the mber that's important, but rather

umber that's important, but reiner itting them with the experience we eed," he noted.
"We're dealing with very complex perating systema, protocols and net-works that are tied into county, state

and federal systems," he explained. How is Meyer keeping the people he has now? "By being a modern shop and offering competitive sal " he said.

But that's not all. "We're grown our own technical talent by enco aging our people to teach courses at the local universities," Meyer ex-

ovide basic courses, eight or nin of Meyer's programmers teach date bases and other advanced subject that they and we need," he said The Data Service Bureau also has an internship program at the Califor nia State University at Los Ange

Are there problems in being ruled by committee? "I really get very little direction." Meyer explained. "I have to be totally self-motivated and still have a lot of self-confidence because, even though! get little direction, if something goes wrong, I'm still re-soonsible."

## Sperry Unwraps 1100/70

(Continued from Page 1) The 1100/60 systems use 16K-bit

chips.
All 15 models utilize the ver 1100 operating system and are comatible with applications software rritten for the 1100 series. Users of the 1100/60 systems can field-up-grade their systems to 1100/70 capa-bility for \$60,000 to \$90,000, depending on how much memory their ent systems hold

A key feature of the 1100/70 sys tems are central processor and 1/O units that function independently but are housed in a single cabinet that saves floor space, a spokesman

Another hardware highlight of the system, according to Sperry, is its main storage, which is integrated into the CPU cabinet. Each processor stores up to 16M bytes of memory,

with the multiprocessor models stor-ing up to 32M bytes.

This improved memory capacity enables the 1100/70s to make better use of the company's Decision Sup port and Development System soft ware package, the spokesman said An extended instruction set allows 1100/70 users to extract more performance out of high-level languages and systems software, he added. The 1100/70's central equipment complex contains either a Distribut-

ed Communications Processor (DCP) 40, which supports 256 communica-tions lines, or a DCP 20, which handies as many as 48 lines, as well as a DCP 10 that supports up to six lines. The DCPs serve as front-end proces sors for all communications Inter faces including transaction process ing, time-sharing and remote joi

entry. The 1100/70s have a disk contro ler that permits the attachment of up to 16 of the company's 512M-byte Model 8450 and 8470 disk drives to a single or dual channel. In addition, it connects up to four 8480 disk drives, each of which also stores up to 512M bytes, and is compatible with three versions of the company's cach disk subsystem, all Sperry-support public data networks and distribut

sta processing connections.
Filling out the list of systems fores and capabilities are multiple

tem components in multiple CPU and 1/O unit systems, independent 1/O units, byte-oriented 1/O channels, word-oriented 1/O channels, redundancy among system components and independent simultaneous

nems and independent simultaneous communications processing.

The price of the 2M-byte, entry-level 1100/71, which offers a systems support processor, DCP 10 communi-cations processor, 5057 mass storage two 8470 disk units, two Uniservo 22 magnetic tape units and a 0776 line printer, is \$395,297. On a five-year, leasing plan, the system leases for \$10,504 a month.

#### Tape Subsystems

Tape Subsystems
Both Sperry's Uniservo 26 and
Uniservo 28 are dual-density group
ooded recording (CCR)/phase-encoded units. Transfer rates are 480K
byle/sec CCR and 120K
byle/sec CCR and 120K
byle/sec CRA and 20K
byle/sec phase-encoded for the Uniservo 28.

The tape subsystems can be con-figured with one to eight tape units and one or two control units, Sperry

The subsystems provide a dual-channel option that allows a 5055 control unit to attach to two block multiplearer channels. Dual access options are available on the tape

The 5055 control unit costs \$22,700: the Uniservo 26 costs \$22,000; and the Uniservo 28 is priced at \$24,750. Monthly cost on a five-year lesse is \$610 for the 5055. \$620 for the Uniservo 26 and \$690 for the Uniservo 28. including mainte-

The tape subsystems will be available in November. More information is available from Sperry through P.O. Box 500. Blue Bell. Pa. 19424.

#### Corrections

Advanced Systems, Inc.'s A5/8000 processor family support IBM's Extended Architecture (XA), contrary to what was reported in a recent sto ry [CW, May 16] about the produc





# LONE EAGLE

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Nope, it's a Supersort - SyncSort CMS. And it does for VM/CMS what other versions of SyncSort have done for OS/VS and DOS/VS(E).

A couple of years ago there was no such animal as a highperformance sort program for VM/CMS. As a result, certain kinds of processing were just plain impossible with the system. It's a miracle that VM/CMS survived at all.

Then SyncSort CMS was hatched. It was the first and only sort program designed exclusively for VM/CMS, And it gave leading-edge processors a powerful tool for liberating the potentialities of their system.

In a little over a year, SyncSort CMS has acquired over 350 users. It's growing at a faster rate than either SyncSort OS or DOS were at a similar stage in their development. Here are some of the reasons for that astonishing growth:

 SOARING PERFORMANCE. SyncSort CMS includes many of the technical breakthroughs we pioneered in OS and DOS sorting – innovations that are now patented

The best way to find out what this revolutionary new sort program can do for you is simply to try it. You'll be amazed at how little VTime, Time, Elapsed Time and SIOs it requires. You'll note a sharp drop in response times and a surprising increase in system throughout.

FINE-FEATHERED FEATURES. SyncSort CMS liberates programmers. Using the programs full range of features, you can often produce a simple report in one day rather than five. These can do the following:

- Select relevant records;
   Reformat records on auto-
- Reformal records on output;
- Perform summaries of designated numeric fields;
   Produce reports with pagination, headings, dates.
- Produce reports with pagination, headings, dates.
   GREATER VERSATILITY. SyncSort CMS is a bird for all
- It can be invoked from other COBOL, PL/1 or BAL programs.
- It sorts CMS, SAM (OS or DOS) or VSAM files.
- . It dynamically allocates space on TDSK.

4. TOP-FLIGHT SERVICE. Ours is the best in sorting. More than 85% of all inquiries are resolved within 24 hours.

If you'd like to realize the full potential of VM/CMS, give us a call, and we'll introduce you to SyncSort CMS. It's a great chance to replace a vulture with an eagle!



## Compliance Easy for Some, Hard for Others

By Paul Gillin

CW Staff
Although few bank DP managers
re fans of the Tax Equity and Fiscal
kesponsibility Act of 1982, some
ound the reprogramming required
to comply with the law less painful than expected, according to inter-views conducted recently by Com-

However, DP executives at banks that administer many trust funds or offer a variety of investment plans have found compliance considerably

more difficult.

The Melion Bank of Pittsburgh.
Pa., budgeted \$1 million for the modifications but was pleasantly surnsed when costs came in at only prised when costs came in at only \$600,000, according to George DiN-ardo, senior vice-president of infor-mation management and research. "It really wasn't as complex as we thought. They kept relaxing the rules as we went along." Mellon Bank maintains for every customer a central name and address file that includes account relation-"That's a very convenient place to store that information so that when each application system posts interest, we dump that into a bucket on the central file," DiNardo said "Thus, we have a grand collector, and we deduct the 10% from that."

Separate Field for Interest

Melion also wrote a separate field nto each application to capture the sterest and deduct it when it eaches a certain amount. Customers will see a separate line on their state ments, indicating the total amount withheld, and the Internal Revenue ervice will get a breakdown of hthholding by each interest-bearing account.

The Provident Savings Bank of

altimore found that a packaged ap-lication was cost-effective for its

smaller operation, according to Rich ard Biggs, vice-president of informa-tion development and applications. The bank bought a package from Disc, Inc. that calculates the withholding amount as the information is passed from the posting transaction. As a result, the bank has had to

modify less than 7% of its total application library, Biggs said. "If we had chosen to go in-house, we would have had to change all the reporting and totaling programs. All we do now is deal with the posting and crediting programs, and all of the re-porting is a byproduct of the Disc package."

package Most executives interviewed said that trust accounts, which usually contain many subaccounts, present ed the worst problems, particularly in light of the numerous exemption

"Say we have an account from an estate and there are 20 people who

allowed by the law

are beneficiaries of the proceeds of the samings of that account," and the same of the sam

He added that his bank's withholding project is coming in over budget, "strictly because we are a reasonably good-size organization, and there are a number of variables. As we got into it, the project became increasingly complex."

# Vendors of Banking Software Ready for Tefra

By Lois Paul CW Staff

Vendors of banking software puckages have already delivered modifications or new modules de-signed to meet the "withholding at source" regulation their users

the source" regulation their users face july if it is not repeated. A flumber of vendors began make and the source of the source

Bul even if this portion of the leg-islation is repealed, the act still conislation is repealed, the act still con-tains riquirements for information reporting and withholding on Indi-vidual Retirement Account (IRA) dis-bursements. The changes that soft-ware veridors have made to their software peckages will meet these re-quirements, they stressed in recent

Hogan Systems, inc., a Dalias-used software vendor; delivered modifications to its Hogan integrated Deposit System at the end of April. The software involves on-line tables by which the user can set up

tables by whach the their can see up activities or processing criteria.

"We created a new one for with-holding," explained Cayle Swan-strom, the vendor's manager of de-posit maintenance. "It does withholding applied to interest or annuities or both. So by a matter of oing in on-line and setting this flag, hey can turn it off or on for IRAs, for

The effort to make the extensive changes to the software began in December, after Hogan put together a 170-page document that interpreted the regulations and determined its course of action. The actual conversion took 175 man-days of effort and required the development of 20 new modules and admirance to 50 dick.

ferent programs, Swanstrom said. Hogan also developed interfaces to several other vendors' withhold ing packages for customers who wanted to combine them with their

Pacesetter Systems, Inc., also of Dal-las, which developed a \$38,000 sepa-rate withholding package called Pac-er/IRS that was delivered to 30 customers iast week. Pacesetter conceived Pacer/IRS last July and worked with 16 large banks to refi its design, according to Jim Atchley, Representatives of those 16 banks and 14 other banks that have been li-censed to use Pacer/IRS recently went to Dallas to receive training on

After developing Pacer/IRS, Pace-setter met with Hogan Systems and supplied the firm with the technical information required to develop an information required to develop an interface linking Hogan's banking software with the new package from

Pacester.

Another firm that worked with Hogan to develop an interface between the two firms' products was Duc. Inc. a Baltismore firm that develop the firms of the firms of

The package took four man-years to develop; Disc staffers began work-ing on it in December. "At one point, we had almost every technician in the company doing one part of it be-

The withholding system actually is bundled into Disc's Combined Interest Reporting System. The vendor worked out upgrade pricing for the additional withholding software for current customers of the software. "Some of them paid, very little for that portion, as low as \$5.000," Harris

said.

Diac offered a number of banking software vendors the opportunity to develop an interface to its withbeful overlap an interface to its withbeful of the control of t





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Hogan software.
One of those other vendors is

the firm's executive vice-

#### Law Firm Starts Tefra Hot Line

WASHINGTON, D.C. - The leg islation slated to go into effect July that requires financial institutions to withhold 10% of their customers' interest and dividend payments has raised so many questions that a group of lawyers here set up a hot line to deal with them ne to deal with them The Tax Equity and Fiscal Respon-sibility Act (Tefra) Hotline Call was

established by the law firm of Wilmer, Cutler & Pickering as a service to the members of the Dealer Bank Association, a trade association for nercial banks. "There were just so many or

tional people in the banks [who] ei-ther didn't have access to the regula-tions or found them absolutely tions or found them absolutely impenetrable in trying to read them that we were just trying to provide a service," David Lake, a tax partner with the law firm, explained, "It has

with the law firm, explained, "It has ended up being a tremendously pop-ular service. We get an incredible number of calls on it." Surprisingly, the number of calls has not increased in recent weeks with the increase in talk about re-pealing the 10% withholding provi-sion of Tefra. "More banks, I honestly believe, think it is going to be re-pushed and zern't wortying about the technical quotions." Lake said.

#### **DP** Managers Betting on Tefra

(Continued from Page 1)
"At first, I did not realize the scope of it," John Gibbs, president of Southwest Data Services of Fort Myers, Fla., admitted. "Over time, I realized that we really had a much greatseed that we really had a much great-er problem than we first expected. I'm not sure it's not going to be a bear for a long time. By the time we get it cleaned up, it's going to be a kodlak."

"It became much more complicat-ed than it had to be with all of the ex-ceptions," according to the DP man-ager of a major Northeastern bank, who declined to be identified. "It

ager of a major Northeastern bank-who declined to be identified. "If who declined to be identified. "If through Congress, you can surmise that there is a chance it will be state there is a chance it will be sufficient to be a consideration of the Such veciliation has created moti-vation problems for many DP man-agen, who question whether their most problems for many DP man-den and the surming a system that may never be used. "If a perty hard all the time half he propie are tell-ing you life never going to be em-"Trying to motivate a group of ystems analysis under those cond-sistent of the propie are tell-ing you life never going to be em-"Trying to motivate a group of ystems analysis under those cond-mented [see Contable...]". Com-mented [see Contable...]". Com-served [see Contable...]". Com-parison of the contable properties of the pro-served [see Contable...]". Com-parison of the contable pro-duced the contable pro-ting the properties of the con-table properties. The pro-perties of the contable pro-ting the contable proting the contable proting the contable pro-ting the contable proting the contable proting the contable pro-ting the contable proting the contable proting

the Bank of America in San Francis-co. "Plus, we have had an extremely difficult time getting specifications We still don't have all of the specifi-

difficult time getting specifications difficult time getting specifications are contained as a second of the contained as a second o

Tetra. "Our resources have been employed on modifications and up-where we'd like to be putting our where we'd like to be putting our people to work," he said, more and the people of work, "he said, more and the people of the p

#### Congress Scrambling to Reach Tefra Accord

as me july I implementation date provides for the controversial pro-ision of the Tax Equity and Fiscal esponsibility. Act (Tefra) that re-uires financial institutions and cor-rotations to withhold 10% of interest and dividend payments, legislators to scrambling to reach a compro-se on which the U.S. House of presentatives, the Senate and Pres-ent Resean can aeroe.

ent Reagan can agree. The Senate is scheduled th The Senate is scheduled this week to take up a measure already passed by the House (H.R. 2973), which would repeal the law's "switcholding at the source" provision. The Senate and earlier sent a tariff bill to the House, which included an amendment repealing the Tefra withholding provision and substituting a

repealing the controversial Tefra conference committee of selected House and Senate members to at-tentife to reach a compromise. "It would probably really drag out the battle as to whether we repeal it

the control of the co



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#### From High End to Low End

# ICA Product Introductions Span the Spectrum

CW Staff
ANAHEIM, Calif. — While West

ociation's (ICA) 36th Annual ference and Exhibition here last k ranged from high-end commu-tions devices to a low-cost mes-

A multiuser desktop computer de-igned for communications manag-rs was introduced by Sykes Data-ronics, Inc. The Genus-GC Group Computer performs traditional data processing functions and permits in-terfacing with existing data streams

CW at ICA

and formats for more effective data handling, a vendor spokesman said. The microcomputer rana a Unix-like operating system from Sykes called OS9 and can network through a public branch exchange, it includes 266k bytes of main memory, an 8-in. lioppy drive and a 51-in. Winchester

Available during the fourth quar-ter of this year, Genus-GC will cost \$9,455 without software. Sykes is based at 159 E. Main St., Rochester, N.Y. 14604.

them the Winc Messenger from Mo-hawk Data Sciences Corp. Designed to work with the company's World-wide Integrated Communications (Winc) Electronic Mail Service, the terminal is said to reduce telex costs The Winc Messenger features 32K bytes of local main memory for message buffering and on-screen edit-ing a vendor spokesman said. It will receive 6,000 char./min and spool messages to an 80 char./sec printer. Available in September, it will cost \$5,995 from Mohawk Data Sciences.

corp. ennanced six DCX series of sta-tistical multiplexers to increase throughput and allow interfacing to 18M terminals in a DCX network. A High-Speed Composite Link Card was introduced for the DCX 840/850 multiplexers that reportedly allows data transmission speeds of 56K bit/

stroduced for the same line of mul-plexers. It allows users with IBM's mary Synchronous Communica-

splaces. It attoos usen with notes the control of t

he system.

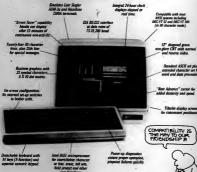
A hand-held controller provides ideo and graphics selection, sudio olume, privacy modes and camera ontrol. The MCS can operate at various motion video rates from 384K it/sec to 2.048M bit/sec or a still rame of 56K bit/sec, according to on Labs

Compression Labs.
One MCS can be connected to another over a local broadband network beginning in the first quarter of 1984. The system will cost \$35,000.
Compression Labs is headquartered at 2005 Berling Drive, San Jose, Calif. 95131.

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ore information about the new Z-29 an lete line of video terminals, desktop exputer systems, monitors, peripherals and fixure, see your nearby Zehith Data System stributor. Or call (800) 323-5924. In Minois, il collect (312) 391-8861.



# Union Oil Tells How It Avoided Micro Chaos

NAHEIM, Calif. — The acquisi-tion of personal computers within a corporation can often result in chaos when users discover that their ma-chines computers with their ma-chines computers with their mahines cannot communicate with the orporate mainframe or with other corporate mainframe or with other micros. But a strategic plan can prevent this high-tech Tower of Bobell-ornia, according to the senior consultation according to the senior conjugate there, Robert E. Dolan UII. Dolan outlined that plan here last week at the 56th Annual International. Communications Associated (ICA). Conference and Enhibition.

**Technology Society** To Meet June 20-22

10 Meet June Zu-LL
CHICAGO — The Technology
Transfer Society will hold its eighth
annual meeting and International
Symposium here June 20-22 at the
IIT Research Institute.
The theme of the conference is
"People Interaction." Seasions will
cover technology transfer topics, including international, industrial/
university involvement.

cluding international, industrial, commercial, university involvement, licensing and legal considerations and state and local government. The registration fee is \$150 for members and \$185 for nonmembers. IIT Research Institute can be reached at 10 W. 35th St., Chicago, Ill. 60616.

#### CW at ICA

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not only regular weekly issues of Computerworld, but our spe publications as well. This include Computerworld Extra!. Computerworld Extra! OA, and Computerworld on



day-Thursday, February 21-23, 1984 La Superdome, New Orleans

See the Show's full page ad in this publication.



#### **Communications Deregulation Seen** As Helter-Skelter Process by GTE Chief

By Bruce Hoard CW Staff ANAHEIM, Calif. — Deregulat of the communications industry has been and will continue to be a helter-

been and will continue to be a helter-skelter process, according to Theo-dore F. Brophy, chairman and chief executive officer of GTE Corp.

Brophy, who spoke at the 36th an-nual International Communications
Association Conference and Exposi-tion heid here last week, explained how both technological and political elements are frequently unplanned and affect communications deregula-

Referring to technological change, he said, "I'm realiv convinced the

technology revolution is still in its infancy" and described research be-ing done toward the eventual development of a private branch exchange that would exist in the form of a

semiconductor chip. semiconductor chip.

Political considerations are just as difficult to forecast as technology changes. Brophy said, adding that new technology has fueied the political controversy around deregulation. "Hopefully, that impact will be beneficial," Brophy commented.

He told his audience that it must

participate in the deregulation pro-cess. "You must be ready to piay an important role in this process while it is being thrust upon you whether

you are ready or not," he stated. It is up to users to help preserve the best elements of the regulated communi-cations environment while also ben-efiting from the opportunities of de-regulation, he said.

regulation, he said.

If users fail to get involved, there is a chance the telecommunications in a chance the telecommunications provided to the said of the said

In 1980, the FCC handed down its Computer Inquiry II decision to stimulate competition in those two

"No matter how circuitous the route, it's clear we've come a long way in substituting competition for regulation," the GTE executive not-

However, several areas of deregu-tion have yet to be resolved, ophy pointed to network planning d said there is a need for a new en-Brophy pointed to network planning trity to assure consistency and accurity in time of national energency, ed. is the designation of customer premises equipment, a process into the control of the contr

"You have a key stake in the reso-lution of these critical issues and un-doubtedly in others that will arise in the future," Brophy told his audi-

#### Softcon '84 Meet Set for New Orleans

Set for New Urleams
BOSTON - Northeast Expositions has announced that Softcon, an
international conference and trade
fair for the microcomputer software
industry, will be held feb. 21-23,
1884 in New Orleans.
The conference will be held at the
Superdome and reportedly will inincommuter software mortacits.

clude more than 1,000 exhibits of microcomputer software products.

In addition, there will be seminar and workshops to brief attendees on new software techniques, analyze trends and predict the future, a apoisesman for the conference said.

Further information about Softcon is available from Northeast Expositions, 822 80450 St. Chestant Hill.

#### The Economics of Office Automation

Many companies are yours bought con-ted word processors to increase office produc-vity. A good idea at the time, but one that no ager makes good financial sense. Bornuse now Molecular Computer offers:

and the bound of the control of the

cest tractoric, nung, ounny,
And word processing,
Molecular offers a unique local area network-in-a-box. With each added user, the system
gets another microprocessor and RAM memory.
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common data base, shared CP/M\*-compatible software, printers, modems, and each other. So you get more performance. For



#### Consultant Sees Deregulation Raising -- Not Lowering -- Costs

By Phil Hirsch CW Washington Bureau ANAHEIM, Calif. — While one ANAHEM, Calif. — While one reason for deregulating the U.S. telecommunications industry is to telecommunications industry is to make its products and services more cost-effective for users, the result may be the reverse, consultant Lee L. Selwyn said here last week at the annual meeting of the International Communications

Association. For example, within the next few months, the Federal Communications Commission (FCC) is interested to the few months of the f

more attractive to users. If the older equipment is almost as expensive, the additional festures provided by the newer terminals make them appear to be bargains. AT&T has been accused of using this "migration strategy" in numerous federal and state ergulatory, proceedings. Recent ECC and court actions, by deregulating customer premises equipment and

#### AT&T Executive Predicts **Higher Private-Line Rates**

#### CW at ICA

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#### CAB Study Finds Airline Reservation Systems Biased

- By Jake Kirchner CW Washington Bureau WASHINGTON, D.C. — The Civil continuation D.C.—The Civil eronautics Board (CAB) has computered in study of airline computered reservations systems, finding at the systems are biased toward eir providers, but the board did not so immediate judgment on the sexuaness of that bias.

#### Washington Update

legations of unfair and anticompeti-tive actions by the systems' provid-

Most travel agents use systems of a few major airlines, which can also be used to book flights on competing

tises to carriers.
Widespread allegations have surfaced that the present systems are tailored to benefit the providers and, in some cases, harm competitors [CW,

According to a CAB spokesman, the emphasis of future action "will not be on whether bias exists in com-

that's a given; it does — but on whether the level of bias is accept-able and compatible with airline deregulation."

In a separate statement, CAB
members James R. Smith and Gloria
Schaffer advised Congress that
enough evidence has been compiled
the bound staff to beein a rule-

by the board staff to begin a rul making procedure aimed at curtail-ing the inherent bias in the major

reservations systems.

American Airlines and United Airlines currently provide the sys-tems most commonly used in this

Reagan Endorses Hot Line Upgrade

WASHINGTON, D.C. - Pres wASHINGTON, D.C. — President Reagan has endorsed a Defense Department study recommending upgrading the "hot line" linking the U.S. and the USSR and used in times of emergency and international ten-

simile capability to the flort line, more properly known as the Direct Communications Link [CW, May 2]. The system now consists of seleropewidispecial control of the con

Summit Embraces Plan For International R&D

WILLIAMSBURG, Va. - The WILLIAGSBURG, Vs. — The summary declaration at the conduction of the U.S' maps risk make the office of the conduction of

The declaration endorsed the re-port of a group of government offi-cials established at last year's aummit at Versailles, France. Prior to the meeting here, that group proposed 28 specific cooperative research and development projects in the fields of advanced science and technology and their effects on education, train-ing and culture [CW. April 25].

GAO: Software Developed In-House Ups U.S. Costs

WASHINGTON, D.C. - Almost WASHINGTON, D.C. all federal agency applications soft-ware is developed in-house, accord-ing to the U.S. General Accounting Office (GAO), which said the failure to purchase off-the-shelf programs

costs. Reporting its findings to the Office of Management and Budget and to the General Services Administration, the GAO said that more than eventories, of 15 agentels valind as part of the study, had been custom developed, either by agency state or contractors.

GAO auditors also obstained infor-GAO auditors also obstained infor-GAO auditors also obstained informations.

rough questionnaires. The report said the 15 sites had ac aired about 1% of their application



#### Commonality of Interests Beneficial

# IBI Chief: Third World, Europe Share Interests

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# IBI Chief: Third World, Europe Share Interests

a commonality of interests be-een the two sectors. This situation uild, he explained, "give rise to a rthier form of international coop-tion, where it is not the case of party paternally giving and the er thankfully receiving, but of co-

countries in a series of specific infor-matics projects [CW, May 30].

The IBI sees the program as put-ting the developed and developing

ordd on a less confrontational ourse, at least in the area of infor-nation. The program, Bernasconi aid, will linvolve "no more alms, no once dispensing and thanking, but at the a relationship on an equal soting with clear-cut, evident and armonious interests."

harmonicous interests."
The program, in supporters argue, is equally beneficial to the developed nations. It could be "the cashyst in the opening of a great market," Berninch of the committee of the country of the co

Suggesting that Third World billion any sillion are constructed should instantiately more billion a year. It is constructed should instantiately more billion a year. It is should be a proposed to the should be a should be

#### Firms Push Sales at IBI Meet

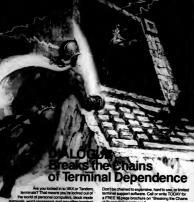
(Continued from Page 15) tries." Not incidently, he added, "we are pretty well-assured there is a large market for the two firms' prod-ucts."

The apecific products they pushed at the meeting were a hospital auto-mation system, covering everything from payzoll and inventory to pa-tient records and billing, and a sys-tem to automate the operations of

tem to automate the operations of municipal governments. The hospital system has already been installed in 400 facilities in Ita-ly, according to the firms. Antonio Beninati, Olivetti market develop-ment manager, said the system is based on his firm's 16-bit, 4M-byte

based on his firm's 16-bit, 4M-byes \$9600/44 processor and software de-veloped by Italsiel. Because the IB liniaists on complete technology transfer in any project it includes in its informatics program, the organization will being testablish a software house within any country software house within any country software houses will be responsible for adapting the software for local needs.

for adapting the software for tool in addition. Bit bethrild premoted will verify the anisation of the receipt of the control of the control of the company of the control of the property of the control of the property of the for explantation the property of for explantation the property of the control of the property of pr



D SOFTWARE CORPORATION



# Survey Shows IBM's VM Gaining on MVS

By Lois Paul CW Staff
FRAMINGHAM, Mass. —

A survey of 683 IBM sites na-tionwide revealed that almost as many CPUa were running tBM's VM/370 oprunning times vM/Sev op-erating system in 1982 as were using MVS, although VM's popularity still rests among different segments of the IBM mainframe popula-

IBM's IBM's premier operating system, OS/VS2 (MVS), has enjoyed "steady, but undra-matic" growth and did not

matic" growth and our not significantly enter new shops in 1982 the way it did in the past.

These were two findings of International Data Corp.'s (IDC) 1983 "IBM Software

avironment" report.
About 21% of the survey About 2x or me nurvey WA/570, an increase of over in the table above showing the distribution of operating 46 in one year "YA has systems on 1884 500, 707, 30 series and 4500 series processor of the properties of the control of the properties of the properti

(see figure above). Year-end 1979 rigures in-dicated that 14% of the sur-appreciable increase in the

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370/115	5	-			80.0		20.0														
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		2	33.3		44.4	-	22.2	4110	-	-			-		-	-	-				
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					-	100	4342	20	1.1		14.1		1.7	5	1.5	. 6	2.3	89	26.3	10	2.5
SUB TOTAL	529	5	0.9	12	2.3	294	55.5	28	5,3	48	9.1	4	0.7	6	1.5	14	2.6	104	19.7	12	2.3
3031	39		-	1	7.5		19.3	,	17.0	10	48,7		3.1		2.6						
1032				-	100	411011	-	2	17.9	11331	50.0	4121		-	2.0	-		3	7.7	2	5.1
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3061	72 -			-				-	***	23	21.0	34	19.0	- 2	3.2	- 2	1.5	7	11.1	2	3.2
	-				311					20	71.0	-	4.5	-	-	-	-	1	4.5	/	
SUBTOTAL.	130	- '	-	ŧ	0.8	5	3.6	12	9.2	77	59.2	16	12.3	3	2.3	ŧ	0.8	11	8.5		3.1
TOTAL	652	a	2.5	50	5,9	345	40.8	46	5.6	148	17.4	38	4.5	19	2.2	21	2.5	140	16,4	19	2.2

sors as of December 1982, the 'other' category includes OS MFT and OS/MVT as well as Edos.

ning MVS.

The surveyors found no

dicated that 14% of the sur-yey sites used the BBM MVS percentage of sites running operating system. Two years that base management sys-later, this percentage rose to the sur-tems (DBMS). IBM's IBM's IBM's IBM's and exactly 21% for all of the ma-chines in 10°Cs sample. At of the sites with DBMS soft-

the survey indicated that its overall share is declining. Cullinet Software, Inc.'s IDMS product was shown to ing pres

ferings from Applied Data Research, Inc. and Software IBM's CIC5 was the tele processing monitor being run at 83% of the sites polled monitor being Among the products from independent vendors, Cincom's Environ/1 garnered the next highest share of the market. IBM's Interactive Computing Control Facility proved to be the most popular product used for in-house time-sharing, Just under 40% of the sites surveyed were running this software, reflecting its popularity amo IBM 4300 users, the surv ors noted. IBM's TSO ma tained its presence in (Continued on Page 18)

#### Three Reasons System/Manager Stands Alone

improves disk space and disk capacity by up to 50%.

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See the Show's full page ad in this publication

#### Logic Users Meet Set for June 12

DALLAS - Logic, Inc. will hold its annual users conference on June 12-14 here at the Dallas/Fort Worth Airport Amfac East Hotel. Work-shops will be conducted on the IBM Personal Computer, vendor single interest administration, claims and credit administration, new industry products and managed companies.

The company will also demonstrate the capabilities of its Pro Forma software for the IBM Personal

omputer and Clas-ic Credit inte-rated credit administration system. grated credit administration system, a vendor spokesman said.

General registration for the con-ference is \$150, Logic said from 1100 Stemmons Tower S., 2720 Stemmons Freeway, Dallas, Texas 75207.

#### Minn. Shuts Down Pyramid Sales Scheme

ST. PAUL, Minn. - A pyramid ales scheme that boasted it used a aputer to ensure fair payment for bers' recruiters has been shut own in Minnesota, and the promoters have been fined \$31,000, the state Attorney Ceneral's office has an

Computerized Markets Co. of Denver said it recruited between 600 nd 800 members in Minnesota for a discount coupon offer, which the At-torney General's office said was a thinly disgussed cover for the re-cruiting scheme. Members paid 2 596 fee purportedly to receive discounts at business establishments and the

privilege of buying discount items Members were also asked to re-cruit others in exchange for a per-

centage of their membership fees Members who reached the top levels of the pyramid were promised over \$54,000 in commissions. The company said that fairness was ensured because the fees and commissions were

tracked by a computer. Witnesses at an April hearing tes-tified that Computerized Markets did use data entry terminals as pron ised, but the legitimacy of the cor pany's claims apparently ended there, according to Dwight Wagenius, special assistant attorney gener-

The firm was unable to prod sufficient evidence that the promised discounts actually existed.

Their sales brochure listed son discounts," Wagenius said, "but the

Wagenius added that no more than 12 copies of the promised dis-count catalog were ever produced.

# Report Covers

Micro Security PLYMOUTH, Mich. - Computer

PLYMOUTH, Mich. — Computer Protection Systems. Inc. a consulting Protection Systems. Inc. a consulting Protection Systems. Inc. accounting team security, has announced a special report addressing security in a consulting security as a consulting source as a consulting security as a consulting source and logical security as a consulting security

The report costs \$15 from Comput-er Protection Systems, Suite 4, 711 Ann Arbor Trail, Plymouth, Mich. 48170.

#### IDC Poll Shows Use of VM Up

marketplace by having installed 18% of the programs mentioned by the respondents.

Over 73% of the shops in the sample indicated that they primarily used 18M's Vsam file access method. Over 10% of the sites polled reported they were using Isom as their access.

mernod.

Twenty percent of the IBM 4300 sites sampled reported they have installed or expect to install IBM's Distributed Office Support System (Disons) by the mid-1980s.

Another 35% of the IBM 30 series

shops polled this year mentioned that they will be running. Disons sometime later than 1983, according to the study.

to the study.

The surveyors noted that by the end of 1983 almost 29% of the 683 shops surveyed intend to establish an information center.

Fifty-three percent of the current IBM 30 series sites that were sampled expected to set up information centers by the end of 1983, according to the ICC much.

colors to be a seconding to the IDC report. The IBM Migration Census/Study was mailed to IDC 2000 sites across the country in October 1982 to study the temperature of the Colors of the

# WHAT THE HECK IS AN EXECUTIVE **WORKSTATION?**

A lot of people have the wn should use a personal compute And fancy phrases like "execut workstation" only hide the ber

efits of personal computing under a cloud of nech-babble The fact is, instant informa tion and a computer on every desktop don't always mean big-ger profits and more efficient ger prof

Because when "non-computer people" use personal computers in business, the software they use is always more important than the hardware that's used

But sometimes this softwares just too hard to use, or can't do the job. Or it's already out-of-date All of which confuses the same people it should be helping. We'd like to clear up some of that

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lets you ose the personal computer as a creative tool for better busines We've combined the five most a ful business functions of all perso

tal business functions of all personal computer software - electronic specialsheet, graphics, information management, report writing, and com-munications - into one cast-ro-use, integrated product. Designed for busimesspeople, not programmers.

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computer and use the MBA3 electronic spreadsheet to create a "model" of your business Develop plans and forecasts in a fraction of the time it would take to do them by hand, or by ng a single-function software

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The exposition portion of Softcon will be the largest presentation of personal computer software ever assembled under one roof. More than 800 exhibits will showcase the newest, most providive software products. Dozens of major new packages will be officially unweited to the world at Softca.

The Softoon conference program will bring logether the world's foremost authorities on software who will speak at more than 150 serminars, panel discussions, fourtra and Verdor Montahops. These sessions will only discussions, fourtra and Verdor Montahops are sessions will only experience to the session of the session of the session will only competitive the session of the session of the session of the quite of the session of the session of the session of the participation of the session of session

Because a spectacular event deserves an equally spectacular host city. Softon is being held at the magnificent Superdome in New Orleans Famous for its jazz, its cusine, its architecture and its colonul history. New Orleans has been called "Amenica's European masterpiece" Softcon will happen Tuesday through Thursday February 21 to 23 in the season of Mardi Gras, gwing you a chance to enjoy New Orleans' delightful cultural heritage while you attend the show

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exciting conference and exposition you've ever attended.

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The International Conference and Tradefair for the Software Industry Tuesday-Thursday, February 21-23, 1984 La Superdome, New Orleans

# Senate Panel Eyes Laws for NCIC Regulation

ations. The Judiciary Subcommittee on Patents, Copyrights and Trademarks, which has jurisdiction in some privacy areas, was urged by the Congressional Office of Technology Assessment (OTA) at a recent hearing on the NCE to consider such legislation. OTA recently completed a consideration of the recently complete and the NCE to consider such legislation. OTA recently complete and the NCE to consider such legislation. OTA recently complete and consideration of the NCE to consider such legislation. The NCE of the N

[CW, Nov. I].

"Legislation appears to be most appropriate vehicle for guithe full implementation of a nati the fun imprementation of a satisfaction of the trible in a construction of the constr

Wood, OTA proper director, told the same The File is certainly developing a so-called internate infectionation in The File is certainly developing a so-called internate infection in the control of the

#### Substantial Impact

According to the OTA study, requests for CCH information constitute almost 20% of total requests to state and federal CCH repositories, state and federal CCH repositories, portred that figure to be more than 40%. Because an estimated 36 million Americans — about 20% of the total work, force — have criminal history records, which include instances of acquittals, monpresecutions and constitution, the OTA revaried that "the inpact of record dissemination adividual privacy and emplorospects could be substantial. The problem is compound

proach to noncriminal justice use of these records. Some states regulate it by statute; some do not allow it; and in some states, criminal records are completely open to the public. The COTA's Wood suggested there are Some common features among state-laws that could be the basis for feat all egislation. which, he said, could make the could be supported to the common features among state-laws that could be the basis for feat all egislation. which, he said, could make the said of the country of the

Noncriminal Justice Access Noting that the current III project does not permit noncriminal justice access, Wood said the issue must be resolved because if this access re-mains prohibited, the FBI would be ord file for this purpose, which would defeat the III objective of de-centralization. If it is allowed, he for information "can overbus record repositories to the poin

where efficiency is compromised."

Kier T. Boyd, head of the FBI
Technical Services Division, said the
Senate subcommittee's inquiry into NCIC operations and policies is wel-come. NCIC Section Chief David F. Nemecek told the subcommittee that the FBI has awarded one contract to a consultant and is considering a sec-ond contract proposal to look into the issue of noncriminal justice

committee Chairman Sen.

tive, accurate and secure CCH

tive, accurate and secure CCH ex-change system.

Mathius said legislative efforts in this area over the last 13 years "bore little fruit." For the last several years.

The agencies and the states have had to tackle by themselves the chal-lenges posed by new information technologies and by new information technologies and the preve demandal exactively a thing the state of the con-tractive of the contractive systems, with exactively a thing and the from the national legislature," he said.



#### Law Professor Advocates Limited Access

WASHINGTON, D.C. - Estab-

WASHINGTON, D.C. Fatab-lished consistional and social tradi-tions argue for restricted access to marked to the second of the second time argue for restricted access to matter for employment and licensing purposes, according to an infer-cision of the second of the second practice of using police data bands, particularly the federal futures of far-particularly the federal futures of far-particularly the federal futures of the mattern Center, to perform back-ground checks on andidates for pictures and that, in general, cranitand history data should be open to the public constraints that militate in behalf of the restriction of access to certain labels, of Ceinfield Mistery informa-tion), seconding to Trabes, directly

of the John Marshall Law Se Center for Information Techno and Privacy Law, Chicago.

The first constraint, he a sults from the pe cence which is protected by stitution and which I important for a free society ing to this presumption, in tion data should not ord open to the pu quitted of char

support of rehabilitat may 'forgive' an indivi-tain pass'

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## MIS Exec Credited for Turnaround



By Robert Batt CW West Coast Bureau LOS ANGELES — Ther

was no overall management information systems (MIS) plan, equipment was outdated, employee turnover was on the order of 30% and only seven of 18 available programmer and analyst positions were filled four years ago in the MIS department at Knudsen Corp., the \$468 million California-based food

Today, the company has inverted from NCR Corp. to IBM equipment, devel ed a five-year MIS plan to give direction to information processing and boosted its staff to 24.

Much of the credit for the transformation has been giv-en to Leslie Scott, vice-president of MIS, who took responsibility for the company's DP efforts in

1979. Under Scott's direc-tion, the MIS department in the last 18 months has con-verted from a batch-oriented NCR 300 mainframe to an IBM 4331 Model 2 and a 4341 Model 1 running under DOS/VSE. The MIS depart-ment also includes 'IBM's Systems Network Architec-

As part of that process, Knudsen installed 40 IBM

switched 500 programs fro NCR Cobol to IBM Cob converted to a DL/1 data base and began using IBM tools such as CICS, Interactive Computing Central cility (ICCF) and Vtam. The NCR envir

was simply not attracting the motivated computer profes-sionals that we needed, Scott recalled in a recent in terview, "so we decided the first step we must take was to convert to IBM." Once that decision was made in July 1981, the company had eight months to convert before the NCR equipment was due to

pointed to oversee the conpointed to oversee the con-version and report directly to Scott. Every task, ranging from educating DPers and operators to developing atan-dards for the 4300 main-frames and DOS/VSE operat-ing system, was identified and a schedule set up of what should be done, by whom

Progress was reviewed at weekly meetings, and a doc-umentation library was set up for the first time.

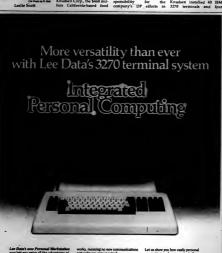
In addition, a new system manager, conversion manager er and operations manager were hired.

Training DP Professionals

The major problem was to The major problem was to train the company's DP pro-fessionals in the new IBM tools before the lease for the NCR equipment ran out. Knudsen set up in-house courses and brought in outside consultants to teach DPers how to use the CICS and ICCF interfaces.

"We have had very fe "We have had very few problems since converting." Scott reported. "We did all the parallel runa ourselves and made the conversion completely transparent to the users."

Scott estimated that the conversion, which cost \$159,000, will save the company \$700,000 each year. The new system automates many ly carried out manually, so as vehicle scheduling



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CICS/VS APPLICATION DESIGN	

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#### This Mumps Users Group **Catches Commercial Users**

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sis is strictly commercial.

Tour years ago, there were hardly
any commercial applications of
commercial applications of
president of CDS Systems, Inc. in
Emsford, N.Y., and the founder or
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#### Wide Applicability

Wide Applicability
Part of the appeal Mumps holds
for businesses. Toretts said, lies in tes
wide applicability on minicomparts
and even superminis Digital Equipment Corp. Data General Corp.
ment Corp. Data General Corp.
and the IBM Series/I mini can accommend
date Mumps. In addition, Toretta
said, the language can be used on microcomputers based on Intel Corp.'s
8086 and Motorola, Inc.'s 6809 micro-

Manya lends their operative to large and the second will be large abased to large hasts keeping track of encurrent said.

The language was written by doctors, who tend to abbreviate account, and the second so that the second so the programmer analyst and to the second so the second so the program instead of worping about the second so that the second so the second so that the second so that the second so the seco

ing about meaning the control of the

Malcolm Pirale, Inc., an environmental engineering firm in White Plains, N.Y., belongs to both the Jo-cial and national MUGs. For his, Ts-MUG in "invaluable for information exchange" among Mumps users. As for the language itself, Ford be-lieves "Mumps in very good for peo-leves "Mumps in very good for peo-leves" Mumps in very good for jering with their reconstantly the leving with their reconstantly the re-lation of the leving with the re-lation of the leving with the leving and the leving with do it.

do it.
"We live in a Cobol-Fortran-domi-nated world," Ford added. "Lan-guages like Mumps will allow peo-ple to move away from these two dinosaurs."

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nal allows customers to insert a spe-cial credit card into the terminal, en-ter a personal identification code and

fill up their own gas tanks. A receipt is given by the machine, and a monthly bill is sent to the customer. This is the first application of NCE.

This is the first application of NCE and the sent to the customer. The sent the first application of NCE and the sent the sent

Poole said.
Software parameters are d
loaded from a local host proc
such as the NCR 2925 Petro Management System. In-house data link control is the communication rface between the local host and 1830, allowing transmission

nuch of the bill processing.
When a customer logs on the sys
em, his account is checked to ensur
hat his credit is good. The presen
pplication automates the cash transction from the customer to the deal
r, but future applications could pu
bank in the middle to draw fund
invertly out of the customer's ac

count. This system's advantages currently are mainly for companies that use large fleets of runds and care. When large fleets of runds and care. When clee purchases gasoline, he enters his odometer reading, which allows the system to produce a milef gallon computation for the vehicle. "You can keep a closer eye on vehicle efficiency as well as on routing," footen noted. The system will also help of seel by remolvers.

by employees.

Customers who are not part of a large fleet of vehicles must pay a \$35 fee in order to use the cashless gas

The petroleum management soft rare was developed by Cornerstones mergy Group of Brunswick, Maine, mergy Group of Brunswick, Maine, mergy Group of Brunswick, Maine,

ATM Net

Joined by Visa

nc. has joined the group of final astitutions that will offer a nat wide automatic teller machine net-work (ATM), it was announced here recently. The network, scheduled to begin July 1, will also lay the groundwork for a point-of-sale (POS) network to divining for the

segat lay) 1, wall also by the (CVO) servent to eliminate further the use of cash.

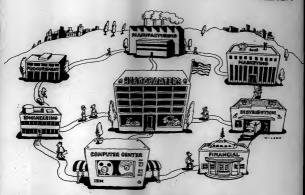
Or of the control of the co

and got a cash advance in the same way.

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CHICAGO - Guests at the Mid-nd Hotel here can now elicit more land Hotel here can now elicit more than the standard entertainment fare from their TV sets. Services including airline schedules, news and stock information, electronic mail and games are available on 100 terminals in the first installation of a videotex system marketed by Travelhost, Inc. of Dallas.

Travelhost expects the network to blanket 100,000 hotel rooms by year-end and be carried by satellite, a spokesman said. The terminals offer on-line,

speciment and.
The terminals offer on-line, menu-driven access to five data bases, including an on-line version because the specimen and the s Telecom Inc.'s Uninet packets switched digital communications network with the host processor and electronic mal facility provided by ITT Dialcom. Users who are customers of Dialcom can use that company's electronic mail facilities, according to Roger Translitil, Travelhous's vice-president of marketing.

Four more data bases will be add-

ed by the end of 1983 to offer restau-rant menus and reviews, on-line shopping and a list of job opportuni-ties. Dozens of other categories of service are under consideration, service are under con Thrailkill said.

The service costs about \$20/hour at prime time and \$7/hour at evening rates. Member hotels receive a \$1 commission every time the net-

The announcement was hailed as a major one by Bernell Wright, director of videotex services for Link Resources, Inc. of New York. "The Travalhort connect in international connections." sources, inc. of New York. The Tra-velhost concept is interesting because it is the first time a business-man can think of traveling as an arm of his company," Wright said. "It provides a very important test case to see how far the opporator can en."

provides a very important test case to see how far the concept can go." Travelhost, which is best known for its Travelhost magazine, travel agencies and services, is extending its services to accommodate telecom-

its services to accommodate telecom-munications.

Travelhost also manufactures the keypad terminals provided in the ho-tel rooms and will soon provide the notebook-size machines to members as part of its \$395, two-year membership fer. The company is betting the spiral back in-room terminals with a part of the company is betting the spiral back in-room terminals with a spiral back in-room terminals with a part back in-room terminals with a part back in the spiral back in the spiral part back proportion to access the Tra-velhost data base from any tele-nhome.

Travelhost's Planned Communications Network

said he thinks the keypad design which makes typing cumbersome, may inhibit Travelhost's plans. "I'd like to see something a little more quality-looking. I also wonder how durable it will be." he said. "It doesn't feel like a good strong termi nal," according to Wright.

Although the videotex market is an untested frontier, "the leadership in this industry will be provided by those who get into the market first." Thrailkill said.
"If we had waited a couple or three yearn, it would have happened anyway." Thrailkill added.

#### THE DATA-FACIORY:

DATA CENTER **OPERATIONS** & SYSTEMS DEVELOPMENT

#### by EDWARD G.ROESKE

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next seminar.

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Burlington, VT Chicago- Arlington Hts., IL	July 12, 1983	Milwaukee, W1 New Haven, CT New Orleans, LA	June 21, 1983 June 21, 1983 June 23, 1983	Rochester, NY San Diego, CA Tarma, FL	June 14, 1983 June 21, 1983 July 7, 1983
Fredericton, NB Houston, TX	Aug. 10, 1983 June 23, 1983	New York, NY	June 22, 1983 July 26, 1983	Toronto, ONT Washington, DC	June 22, 1983 June 15, 1983
Kansas City, MO Lexington, KY	June 16, 1983 June 28, 1983	Omaha, NE Ottawa ONT	June 22, 1983 June 23, 1983	Wichita, KS	June 23, 1983

Cullinet

#### Calendar

#### This Week

June 7-8, Farmington, Conn. — Dump Reading (Includes CICS and DL/1 Dumps). Contact: Keith Lamb, New England Data Services, Suite 4, 1353 Boston Post Road, Madison, Conn. 06443. June 7-8, Boston — Microcomput-

Laurova, Boston — Microcomputers and Organizational Productivity. Contact Micro Conference, 215 First St. Cambridge, Mass. 02142. June 7-9, Dallas — Ada Launova, S. In-Depth Ada Launguage Technical Sensitian. Contact Seven Contact Sensitian. Contact Seven Contact SAS Institute. Inc., P.O. Box 8000, Cary, NC. 27511.

June 8-10. New York — PC Exper Show For Volume End Users of IBM Personal Computers and Compati-bles. Contact: H.A. Burno, Inc., 110 Charlotte Place, Englewood Cliffs, N.J. 07632.

June 8-10, San Francisco — Plan-ng for XA. Contact: Techtran, 72 ning for AA. Contact: Fechtran, 72 Cummings Point Road, P.O. Box 10212, Stamford, Conn. 06904. June 8-10, San Francisco — SAS Applied Time-Series Analysis and Forecasting Course. Coptact: SAS In-stitute, Inc., P.O. Box 8000, Cary,

June 9-10, San Francisco — Data Facility Products. Contact: Techtran, 72 Cummings Point Road, P.O. Box 10212, Stamford, Conn. 06904. June 9-10, Cary, N.C. - SAS Color Graphics Course. Contact: SAS Institute, Inc., P.O. Box 8000, Cary, N.C. 27511.

#### Week of June 12

June 13-15, New York — Audit and Control of CICS. Contact: MIS Training Institute, Inc., 4 Brewster Road, Framingham, Mass. 01701. June 13-15, Boston — DP Disaster Recovery Seminar. Contact: EDP Se-curity, 181 West St., Waltham, Mass. 02154

June 13-15, New York — Facilities for Auditing IBM'S DOS/VS Opera-ating Systems and Facilities for Au-diting Within IBM'S OS/VS Opera-ing Systems. Contact: MIS Training Institute, Inc., 4 Brewster Road, Framingham, Mass, 01701

June 13-16. Philadelphia — CICS/ VS Application System Design. Contact: Ross DiSanto, Complex Technical Grap., 1133 Ave. of the Americas. New York, NY. 1030. VS Testing and Debugging, Contact: Ross DiSanto, Complet Technical Grap., 1133 Ave. of the Americas, New York, NY. 1036. June 13-17. Lombard. III. — Pro-ressional Systems Analyst Developer Corp., 611 E. Buttrifold Ross, Lom-bard. III. 60148.

Corp. 61 E. Butterfield Road, Com-brd, Ill. 60148. June 13-17, Oakbrook, Ill. — Es-tablishing, Compater Centiguration Capacity, Contact: Institute for Soft-ware Engineering, 510 Oakmead Pksey, Sunnyvale, Calif. 94086. June 13-17, New York — Work-shop in Data Base Audit and Con-stance. 4 Brever Bertaining Institute, Loc. 4 Brever Bertaining Institute, June 13-17, Sunnyvale, Calif. —

Inc., a Breventer Bood, Freningham, Live 13-17, Samprayle, Calif. — Software Development Performance Performance Performance Performance Performance Performance Performance Control Street Performance Central Street Performance Central Street Personance, Calif. 2006. — Optical Street of Decuments and Isages. Contact Technology Opportunities, Contact Erich Lands. New England Data Services, State 4, 1253 Boston Date 14-10, Martington, Va. — SAS. Basic Course. Contact Sept. Bas

27511.

June 15-17, Arlington, Va. — SAS Precessing Course. Contact: SAS In-stitute, Inc., P.O. Box 8000, Cary.

N.C. 27511

N.C. 27511.

June 15-17, Ottawa — The Fir Canadian Domestic and International Satellitte Communication Conference, Contact Informatic Catekeepers, Inc., Suite 111, 18 Corry Road, Brookline, Mass. 02146

June 16, Scottsdale, Ariz. — The Economics of VLSI Procuremen Contact Howard Dickers, Suite 70 of E. Camelback Road, Scottsdale Office Camelback Road, Scottsdale Road, Sc

Ariz. 85251.

June 16-17, Boston — Softwarr Requirements Analysis and Design Contact: Data Processing Management Associate Educational Foundation Seminars, P.O. 80x 3608, Depart ment SRD, Torrance, Calif. 90510.

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# COMPUTER ASSOCIATES



#### Calendar

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Context Mutther Malok, The American Countries, 121, 147, of the American New York, N.Y. 1000A.

D.C.—BMY System Network, Architecture, A. Natier Plan for Teleprocessing Countries, 121, 147, 1000A.

BMY System Network, Architecture, A. Natier Plan for Teleprocessing Countries Senting Department, of the Countries of the Countries

Kashiwa St., P.U. Box 3009, 10 rrance. Calif. 90510. June 17-19. San Francisco — PC '83/West, Product Shows and Con-ferences for 1BM Personal Comput-er. Contact: Northeast Expositions, 826 Boylston St., Chestnut Hill, Mass.

#### Week of June 19

Week of June 19

June 19-22, Boston — International Conference on Communication, Contact Dr. Leon J. Ricardi, M.I.T. London, Dr. Leon J. Ricardi, M. Leon Angeles, Dr. Leon J. Leon Angeles, Dr. Leon J. Leon

alif. 9071.

June 19-23, Arlington, Va.

—omputer Vision and Fatters Recguition. Contact: IEEE-Computer

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June 20-21, New York — To
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June 20-21, Boston — Networking trensal Computer. Contact: The merican Institute for Professional and Contact and Contact and Contact Systems (1974). If the Contact Systems (1974), If th

tact: Shirley McComber, IIT Research Institute, 10 W. 35th St., Chicago, Ill. 60616.

60016. June 20-22, New York — DL/1 Applications Programming, Con-ception of the Control of the Con-ception of the Control of the Con-New York, NY, 10006. June 20-23, Boston — Function Analysis, Contact (GE) Information of the Control of the Control of the Con-trol of the Control of the Control of the Con-trol of the Control of the Control of the Con-trol of the Control of the Control of the Con-trol of the Control of the Control of the Con-trol of the Control of the Control of the Con-trol of the Control of the Control of the Control of the Con-trol of the Control of the

June 20-24, Houston — On-Line/ Real-Time Design. Contact: Gayle Giesecke, Ken Orr and Associates.

Inc., 1725 Gage Blvd., Topeka, Kan. 104. June 20-24, Chicago — CICS/VS pplication Programming, Macro evel. Contact: Dianne Haiper, On-ine Software International, Fort Lee

ecutive Drive, Executive Park, Iwo Executive Drive, Fort Lee, N.J. 07024. June 20-24, Las Vegas — How to Develop an Effective Long, Range Data Processing Plan. Contact: Dr. Robert Keston, Keston Associates, 11337 Old Club Road, Rockville, Md.

June 20-24, Hartford, Conn. — CICS Command Level Program-ming, Contact: Keith Lamb, New En-gland Data Services. Suite 4, 1353 Boston Post Road, Madison. Conn.

N.J. – Computer in Education (f '83) – Necessary Direction (f '83) – Necessary Direction (f Computer Education: Navigation Aids for the '80s. Contact: Dr. Mistin et E. Batoff, Director, Cr. 13s. Insulate for Professional Development Suite D. 245 Nassau St., Princeto N.J. 08540.

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#### EDITORIAL

#### Track Criminals, Not Workers

The U.S. Congress is threatening in its approaching adoption of a national worker identification system to gas adoption of a national worker identification system to the inhibitor to unknown nadic in judgment. In order to curb the influx of illegal aliens who, it is said, are grabbing jobs and social benefits meant for U.S. citizens and legal immigrants, the Congress suggests and legal immigrants, the polytem of the legal immigrants, the system of the legal immigrants and legal immigrants. In the legal immigrants and legal immigrants are suggested in the legal immigrants and legal immigrants. In the legal immigrants are suggested in the legal immigrants and legal immigrants are suggested in the legal immigrants. In the legal immigrants are suggested in the legal immigrants and legal immigrants and legal immigrants and legal immigrants. In the legal immigrants are suggested in the legal immigrants and legal immigrants and legal immigrants. In the legal immigrants are suggested in the legal immigrants and legal immigrants. In the legal immigrants are suggested in the legal immigrants and le

thus weed out the ineligible — all for a few hundreds of millions of dollars a year.

The idea is so full of flaws that enumerating them gets

In the late is so full of flaws that enumerating them gets to be quite tedious, but a few examples will suffice. First, experience shows there is no such thing as a fraudproof identification system. Congress itself has produced ample evidence of that. Second, the system could become unbelievably expensions.

Third, Congress, in the full flush of confidence in computers, assumes the federal government could run such a system with an acceptable error rate. In fact, the Immigra-tion and Naturalization Service has often been held up as

tion and vacuralization service has oreen been neid up as the worst example of bureaucratic DP bungling. Fourth, even in the unlikely event the system would actually perform as intended, the idea is a civil liberties nightmare. Why should all Americans have to register with the federal government in order to be granted the right to hold a job? Register criminals, not law-abiding

In addition, such a system, which would increase the record-retrieving capabilities of government agencies by several orders of magnitude, would undoubtedly be turned, sooner or later, to other bureaucratic purposes, such as collecting taxes, registering young men for the draft and collecting debts.

draft and collecting debts.
The templation to use such a system for even more neThe templation to use such a system for even more nethere are not to be a system of the state of the st

gress comes up with an idea it judges devoid of political overtones, it immediately adopts it, hailing it as an exam-ple of bipartisan leadership, no matter how bizarre or un-

This, unfortunately, is such a case.



What's the Matter With the Nonpolicy We Already Have?

#### LETTERS

What Users Really Judged I have just read the article about mers' ratings of their mainframes, 'Magnuson M80 Tops Datapro '83

Ratings" [CW, May 16]. While the Magnuson had the highest rating, this would hardly be the case if you removed the criteria pertaining to the operating system compilers and assemblers, applica-

compilers and assemblers, applications programs, ease of programming and ease of conversion. The Magnason computers, as well as all Magnason computers, as well as all the second programs developed for IBM mainframes. The users are, in all of these cases, judging IBM software. It is interesting to note that the Magnason computer than or any other Magnason computer than or any would, however, not interpret this would, however, not interpret this

would, however, not interpret this rating as an endorsement of IBM oprating as an engo-energy erating systems by this group. Pressell R. S

Director of Information Service Evans Products Co. Braintree, Mass.

Free WP Training

Ouch! It hurts to read in the conter community's most influen verkly newspaper that a small Bos-on company must "rock the boat

and be an inspiration to bigger cor panies like IBM" in the matter of fr sining in word processing skills.
The article "Trainer Offers Fr The article "Trainer Offers Free WP Courses to Unemployed" [CW, March 28] creates the impression that only one small firm in Burlington, Mass., is offering free training in word processing skills to the economically disadvantaged in Massa.

ware of.

I am surprised, in fact, that Compressed did not catch Robb's errore the Roxbury. Mass. traininter has received a lot of attention both the Boston area and nation

The Criminal's Problem

I'm glad to see from the arti "Crime in Chicago: Data Base Sear Reveals Rampage of Chronic Sho lifters" [CW, May 16] that Chica police are now able to identify qui ly career shoplifters and serious

hen the judicial system worries ore shout the criminal than it does out the victim, demanding early

#### DATA PAST

June 5, 1978

NEW YORK — The Astr Computing Machiner
ked Soviet President I

June 6, 1973 NEW YORK — Nearly 30,000 at indees and the return of IBM as an nal trade show were expected as the first National Computer Conference and Exposi-ion opened its doors here. Two hun-

Ten Years Ago

## **Getting Clear About Execution Environments**

'Systems are characterized as single user or multiuser. "Multiuser" means that many users can simultaneously share the computing resources, independently and at the same time. This denotation does not necessarily dictate the nature of the computer operating environment itself. Both single and multiuser systems may offer equally complex operating environments, since a number of applications programs or jobs can as easily be initiated by a single user as by a group."

number of applications p jobs can as easily be in single user as by a group Nevertheless, the circu

HUMAN CONNECTION / Jack Stones

# Guidelines Needed for Breaking Into DP

#### **Defining Execution Environment Terms**

Sequencing of such related and interacting tasks is dictated by the rendezvous function. Tasks can either declare an entry point awaining results from other tasks or declare an accept, indicating that they are gody to deal with an entry call. Working together, the accept and entry features cause the rendezvous.

#### Conditional Logic As can be seen, the mu

tasking process requires a multiprogramming capabili-ty, with an additional re-quirement that a conditional logic must apply to the pre-cedence relationship of the

one men apply to the pretope and the state themselves.

The term "multitaking" is sometimes anigned to 
computer programs with a 
structure and organization 
that allow concurrent executhat allow concurrent execu
A program with this feature is also often described as 
being eigher resuable or 
"Resuable" and "rescirer"Resuable" and "rescirer"Resuable

be initiated and shared by different users, without hav-ing to restore the program individually or having sepa-rate execution copies for each such user. It is preferable, however, to distinguish such computer programs from serial pro-

programs from serial pro-gram execution, or single-thread programs, by refer-ring to them as multithread programs. We restrict the term "multitasking" to the definition already offered

#### Executing Environments

This brings us to the influence of the hardware on executing environments. The first important consideration is the availability of more than one CPU.

If a computer system in-cludes more than one pro-cessing unit, then it is possi-ble to introduce another concept, the notion of multioncept, the notion of murri-rocessing. The overall envi-romment now can really get implex, as one imposes the rogramming facilities and ady described above. It is, for example, possible mply to run two programs aite independently of each

atever the case may be, should be very clear what is intended. ut any clarification,

following meaning: a system that executes jobs assigned by a master executive to

#### Time-Sharing System

operational environment is the time-sharing system al-ready discussed. It was noted that time-sharing can simply

ther the interleaved usage of a single processor by many

a single processor by many simultaneous users. A special case of time-sharing is the popular execu-tion mode often found in memory-partitioned systems, the so-called foreground/ background operating envi-



#### DPers Can Adapt

DPers Can Adapt
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#### LETTERS

#### Defining Terminology

(Continued from Page 34) suggested that confusie would be eliminated if suc descriptions were to be limi-ed to picking the applicab-terms from each of the for following categories: Number of Simultaneou Users: Single user and mu-tiuser.

Programming Execution: programming Execution: ingle thread, multithread and time-sharing. Frank is an multipendent con-ultant and president of the Verner Frank Computer Group ocated in Calabasas, Calif.





#### Attention:

Data base administrators IMS-DL/I programmers SAS users

# SAS/IMS-DL/I saves you time

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#### Oxford Offering Free Software To Its 'UFO' Users

HASBROUCK HEIGHTS, N.J. - Following what appears to be a recent trend toward software-related give-aways, Oxford Software Corp. has an-nounced it will offer over \$5 million worth of free software to current and prospective users of its User Files On-Line (UFO) package.

ownerd a move is intended as an ex-pression of thanks to its users in con-junction with the L500th installation of UFO. an IBM CICS application develop-ment system. The firm'a president, Judd Shanker, said, "We signals Shanker, said, "We simply want to rec-ognize their contribution to our success in a material way that they can appreci-

ate." Squeeze, the software package being offered to current UFO customers and anyone who installs the product on trial through August, is a data compression routine utilized by CICs which is designed to reduce the amount of data ent to remote IBM 3270 devices. Developed by Oxford for in-house use to enhance response time on its terminals, Squeeze operates in IBM DOS and OS servironments under CICS Release 1.4 environments under CICS Release 1.4

hough Squeeze is not of (Continued on Page 40)

#### Service Firm Tries Utility, Solves Downtime Problem

not bring up its on-line IBM CKS envi-ronnent the next day.
Since the unavailability of its system spelled a loss of dollars for Lindustriella-Services Techniques, Inc. (IST), a year ago the firm began to look for a possible solu-tion to the problem represented by the missing data seek. After considering the possibility of developing a dynamic data of the constraints of the constraints of the con-traction of the constraints of the con-traction of the constraints of the con-traction of the con-traction

house, IST decided to go outside and be-came one of the first users of Software Technologies and Research, Inc.'a CICS Dynamic Allocation/Deallocation Subsys-

where we are in the service buries en-vironment, our customers do their off-hour processing on their own time with their own schedules and procedures. We had to find a way to isolate ourselves from the vagaries of other people's processing and other people's errors, 'Jacques Des-biens, manager of IST'a Data Base/Data Communications Software Course.

#### Vsam Transparency Supported By ADR's CICS Service Facility

PRINCETON, N.J. — Applied Data Re-search, Inc. (ADR) has announced Release 2.2 of in ADR/Dataon(PB CICS Service Facility, The new release supports IBM/ Vann transparency, provides problem-solving capabilities and supports IBM/ SX/YSE operating environment. The release also allows the ADR/Data-com/DB (IBM/ Vann Transparency Fes-com/DB (IBM/ Vann Transparency Fes-

code and returned data.

Operator commands have been enhanced to include the current number of
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DOS and \$93,000 for resalter environments.

The permanent flores price for ADR/DA
DOS and \$93,000 for resalter environments. DUS and aryon for smaller elevationing. The permanent license price for ADR/L tacom/DB is \$73,000 for OS, \$59,600 l DOS and \$44,700 for smaller environments. ADR is located at CN-S, Route 2 & Orchard Road, Princeton, N.J. 08540.

#### Page Migration Tool Introduced For Users of IBM's VM System

RIDGEFIELD, Conn. — Adesse Corp. is announced VM/SP Enhanced Page figration (EPM) for users of IBM's VM

spotesman and. EPM is said to be compatible with a number of storage devices, including the IBM 2305 Model 2: Intal Corp.'s 3805, 3815 or 3825; Mémorres Corp.'s 3864; and Storage Technology Corp.'s 4305.
EPM makes more high-use pages available on the high-speed preferred system paging devices, reducing the time re-

# CICS Users: Increase System Uptime

ynamic Allocation Dea	Rocation Subsyster
Improve Mean Time	to Recover
Ease Batch Schedul	ing Constraints

Simplify Problem Determina Improve CICS System Productivity

Take DADS Advice for Greater CICS

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	Send me DADS for a 30 day free trul I'm interested, phase provide more information at	CW-4/6/83
0	Also please provide information about the complet software products available from STAR.	e tarrity of

#### Runs Under DOS/VSE

#### Under staffed? Behind Schedule?

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**Tool Offers Inventory Control** 

d the Receipt, Quality aterial Control System

#### System Handles **ACH Inquiry**

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#### For DC-2 and Data Base Design Products

## **TSI Offers Custom Dictionary Facility Option**

NORWALK, Conn. — Unlimited data dictionary extensibility in available through TS internationals Custom Dictionary Facility (CDF), an option to TSTs Data Catalogue 2 (DC) and Facets Package's data base design yields and the control of the control

#### Symbolics' 'MLCS' Linked To IBM's 4300, 30 Series

RICHARDSON, Texas — Symbo-ics Financial Systems, Inc. has an-nounced the availability of its Mort-sage Lending Control System MLCS) on the IBM 4300 and 30 se-

(MLCS) on the IBM 4800 and 30 sees hardware rouning under CICS—inself. And the to date has been recompared to the compared to

neration tools said to allow the ser to mold MLCS to reflect the in-

to be moded MLCS to france the sa-ution's unique requirements.

Using the tools, the user can ex-d, modify or create screens, sub-tems, documents, reports and in-porate new lending programs irely without DP intervention,

#### Release 3.1.4 Of'ACF2/MVS' Adds Security

LOS ALTOS HILLS, Calif. -LOS ALTOS HILLS, Call. — The Cambridge Systems Group, Inc. has announced Release 3.1.4 of its Access Control Feeling 7,200K, said to provide security enhancements as well as sing pliffed security administration as in pliffed security administration of the compatible NVS-based systems of the compatible NVS-based security enhancements include strengthened IBM CICS/Multiple Region Option support and last log-on, the vendor classimed. On the vendor classimed concess is recorded, thinked provides and the concess of the concess of

promised.
The software costs \$27,000 from the vendor at 24275 Elise, Los Altos Hills, Calif. 94022.

#### Core & Code's 'BBL' **Enhanced for DEC** WELLESLEY, Mass. - Core



#### Spend a morning, save a bundle.

#### Firm Solves Downtime Problem With System

Oxford Offering Software For Free to Users of UFO

#### 'Renum' Fits **Fortran Compiler**



ly of master terminal operators lied the Dads environment by selves in three CICS/VS region

ag-compatible maintrame to war a re perpetual license to use one of e vendor's financial software pack-es. The winners were drawn at the ithout any problems," he wrote. A result of the installation of the software has been increased avail-ability of the CICS environment. "I couldn't quote a figure, but I



#### CA-Sort Incorporates VCM, Performance Upgrades

antourced Release 78 of its CA-Sort product, incorporating Virmal A Cylinder Management (VCM) and other performance enhance-ments. The product runs on IBM DOS 1928 Based systems. as with-in the work file to reduce elapsed time and I/Os. a spoteman said. The new release also includes Nicc and Signer options which allow any number of randomly se-dered to the control of the control of the world of polyceman said. The prod-uct uses less disk work space by

For System/38

#### 'MRC-Query' Series Bows

#### **Modeling Tool** Targets Users Of System/34, 38

#### Stock System Tracks Options

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SYSTEMS INC

#### Version II of 'First' Out for Series/1

SAN PEDRO, Calif. — Alphameric Software, Inc. has announced Version II of its Bill Maintenance Inquiry Report Writing Sorting Tools and Software Inquiry Report Writing Sorting Tools and Ingent In Its Software II of the Inc. I proportion of the Inc. I proportion I will be a software I will be a software

MBARD, III. — Cara Corp. has need a decision support-based ting tool that reportedly can tred to fit any systems devel-Computer Sciences Adds **Currency System to Infonet** 

EL SECUNDO, Calif. — Computer Sciences Corp. has added a foreign curvery, management system to his control of the control of t positions held against forward rates.
The Anticipased Funds-Flow Exposure Model cellulates a company's
posure Model cellulates a company's
posure Model cellulates a company's
based on its cash flow requirements
based on its cash flow requirements
over time. It also allaws "what-ifsecaration with projected exchange
exposure. Consolidation of exposures can be reported by account,
product time, subsidiary, currency
posited time, subsidiary, currency
control of the control of the control of the control
control are determined by resource
used with no charge for installation

Fits Any Methodology

used with no charge for installation from the vendor at 650 N. Sepu Blvd., El Segundo, Calif. 90245.

tion can be set up to execute automatically. A menu buildup also is avail-able within the spreadsheet, the vendor said.

vendor said. Version II costs \$2,000, from Al-First is licensed for use on each Se-ries/1 CPU and all programs are dis-San Pedro, Calif. 90732.

**Estimating Tool Unveiled** 

The Epsilon On-Line Estimating Management System is designed to define the components of a project, collect the estimated resource recollect the estimated resource re-quirement for the components, com-pute the cost of each component based on user-defined unit costs and compare the estimates to standard re-source requirements, according to

Pricing starts at \$3,500, depending on the size and complexity of the in-stalled methodology, according to

the vendor

Cara Corp. is located at 611 E. Butterfield Road, Lombard, III. 60148.

#### Pinnacle Offers Intro Course For MVS Users SAN JOSE, Calif. - Pin

course format.
The self-atudy course reportedly covers the 36 MVS system commands meeded to monitor and control MVS. Students practice writing more than 100 command (operand combinations in preparation for actual console operations. The course contains over 400 questions that serve to retine the subject matter. Each minicourse is presented in an individual booklet.

The 15 minicourses were written by Michael A. Kechula, an educator in the operator training field. A set of five complete copies of the course is available for a one-time fee of \$500. Pinnacle Computer Systems, can be reached through P.O. Box 7336, San Jose, Calif. 95150. The 15 min

#### Yourdon Announces Cobol Course

NEW YORK — Yourdon, Inc. has innounced a three-week basic Cobol

Called Yoco, the intensive p gram is designed for employees who want to train employees with little or no Cobol experience. It is also designed to train programmers in the techniques of structured programany computer installa Materials include

Materials include copies of "Learning to Program in Structured Cobol," parts I and II, copies of vi-suals for support. It costs \$30,000 from Yourdon, located at 1133 Ave. of the Americas, New York, N.Y.

HOW DO YOU IMPROVE THE MOST POPULAR TAPE MANAGEMENT SYSTEM IN THE WORLD?



#### Micronotes.

Peachtree Software. Inc. has anmounced the availability of its Pascheret mounced the availability of its Pascheret Personal Campaign and the personal confereign language characters. multiple foreign language characters. multiple to the personal comment of the personal commental and a default print file, a vernbele for \$400 from the relation is available for \$400 from the Floor, 3445 Feachtree Road N.E., Atlanta, Ca. 30326.

Taps/PC Connection, a hardware/ software link from Informatics General Corp. is said to enable up to 128 IBM Personal Computer operators to communicate with seach other. It costs \$25,000 for the initial link and \$750 for each IBM micro connected. Informatics is based at 21031 Ventura Blvd., Woodland Hills, Calif. 91364.

Atom, Inc. has unveiled the Atom Automated Telephone Office Management system for use on Apple Computer, Inc.'s Apple III microcomputer. The software reportedly controls telephone usage by recording and storing detailed information on system acrivity. It is owned to be a system acrivity. It is a system acrive, It is a system acrive and a system acrive acrive

A spelling-checker software module has been made available by Beaman Porter. Inc. for use with its word processing the processing of the processing of the processing of the processing of the processing software with the release of Version 1.5 proced at 3599, a spokesman said from Tiessant Ridge Road, Harrison, NY, 10528.

Wordplan is a text and data formatting package that reportedly enables users to manipulate text and numbers within documents. It runs under the Digital Research, Inc. CP/M operating system and costs \$195. The vendor is DEA See ware, which can be reached through P.C Box 968, Fremont, Calif. 94537.

Multisoff's Multi-Trieve, is a data base management system for the Apple Computer, Inc. Apple II + and Apple II systems. It costs \$199, the vendor said from 120 E. 90th St., New York, N.Y.

Script 64 is a word processing package with a built-in dictionary for Commo dore Business Machines. Inc. Commo dore 64 microcomputer and is available for \$13:95, C-64 Uals in an interface the left Commodore users hook up various printers and disk drives, and it commodore users broken are available from Computer Marketing Services, Inc.

Personal Computer Products has released a product that reportedly allows the transfer of life from April 12 ev. Inc. Apple III. Apple III + and Apple III to the BM Personal Computer and IBM XT. The package sells for \$94.95, the vendor sold from suite C-18, 1400 Coleman Ave., Santa Clara, Calif. 95050.

Microries, Inc., and Select Information Systems. Corp., have pintilly assessmed grain for the IRM Personal Computer. Digital Springment Corp., microcomputer and other lides microprocessors particularly and control of the microprocessors particularly and control of the microprocessors particularly and properties for the microprocessor particularly and properties for the microprocessor for the first time user, the package prossper with simplify data been operations for the first time user. The package prossper with control in the control and sample charts for use in organization. It is compatible with a variety of word processing programs, a variety of word processing programs.

well as with Visicosp's Visicale. To package costs \$295 with informatiavailable from Microrim at 1750 112 Ave N.F. Bellevas Work 60004

Micro Data Base Systems. Inc. has in Incolared Kamwiedgamas, an inform from management system designed to handle dans management, and hoc inquiries, statistical analysis, acrees for enanagement, printed forms managment, procedures and functions and ment, procedures and functions and comp. 80% analysis. For use on Indcop. 80% analysis. Inc. (a CP) of the der Digital Research, Inc. (a CP) of the state of the control of the control of \$500 from the version through Box 24 Lafsyette, Ind. (§ 902).

EWDF Soltware, Inc. has introduced Filebase, a meno- and prompt-driven prokage designed to process files of records, comprised of comma-delimited comprised of comma-delimited 2260 micropium natus or 2260 jilic 's 2260 micropium natus or 2260 micr

Sign Computer Technology has announced the availability of Digital Reearth, Inc. 2 CP/M operating system for in Sage II and Sage IV microcomputers. Sage computers sear at 35,000, including a F-System operating system. More information is available from Sage Computer Technology. Soile 4, 35 N. Edison Way, Ren., Ner. B592.

Quanteckna Research Corp, has announced the release of Quad-PC for the IBM Personal Computer. Quad-PC is a relational data base management system for business and management applications. The list price for Quad-PC is 5695 from the vendor at 6902 220th South-

t, Mountlake Terrace, Wash. 98043.

Readivore Systems has ensurement Readivore, on IBM institutes-compatible increprocessor document formatting system for the IBM Personal Computer, Readivoriter is said to provide user-level compatibility with IBM docmarkup language and script language. markup language and script language. Readivoriter requires an IBM Personal Computer with PC-DOS, I28K layers of memony and two 160K-layer disk draves.

Supersoft, Inc. has released a Fortran compiler for use on 8086- or 8088-based microcomputers under Digital Research, Inc.'s CF /M 86, MS DOS and IBM Personal Computer DOS operating systems. Also available for Zilog, Inc.'a 250, the Supersoft Festina compiler sells for \$425 from the vendor at 1713 S. Neil St., Box 1628, Champaign, III. 61820.

Busineft Analyzer, a ratio analys program for the IBM Personal Compute has been announced by Busineoft Con The program uses information enter from balance sheets and income state ments for up to five periods. It includes column for industry averages. The procut come 5199.50 from 6160 Horsesho Bar Road, Loomis, Calif. 9580.

MAI/Basic Four Business Product Company International Corp. 8 Weed Marropen International Corp. 8 Weed Marropen International Corp. 8 Weed cossing software on the integer word cossing software on the microcomputer. Wordstar costs \$40\* Mailmerge costs \$150 and Spellstar costs \$250 for the \$110, which begins at \$3.99 with a single \$500-byte disakete drive from MAI/Basic Four at 601. San Pedri Foros MAI/Basic Four at 601. San Pedri Foros MAI/Basic Four at 601. San Pedri

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No other company knows more about applications development systems than Oxford. And no other company can provide you with as much valuable in-depth support. Make this summer the time you begin to do something about your OICS backlog. Schedule a UFO trial . . . and get a free SQUEEZE on us!



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### Two-Way Transmission Seen In Wings

By Phil Hirsch

CW Washington Bureau WASHINGTON, D.C. — U.S. CATV network operators are ready, willing and able to provide business users with two-way data channels that bypass the local telephone network, and digital electronic message services vendors are planning to add point-to-point transmis-sion, according to speakers at a recent communications confer-

ence held here. But the U.S. government may block the path of cable op-erators and other specialized carriers in this endeavor, a former Federal Communications Commission (FCC) chairman

The cost of providing twoway service to business users is "modest," Elizabeth H. Olenbush, business development manager of Warner Amex Cable Communications Corp., said. She knows of "at least three"

that "by the end of this year, about half of the installed and planned cable TV plants in this country will have two-way transmission capability." Spaning new year, cable

ing to Jerome D. Lucas, pri

transmission capability."

dent of Telestrategies, Inc. LoBeginning next year, cable cal telephone companies are
TV operators, in collaboration among the possible partners in

this venture. Michigan Bell, Il-linois Bell, Chesapeake & Potomac Telephone Co. and others have already made moves in this direction, Luces said. But former FCC Chairman Ruchard E. Wiley told the con-ferees that bypass vendors face opposition from Congress, state and federal regulators. Page 45

Wiley, now a private attor-ncy, said the FCC's recent ac-cess charge decision will reduce costs for AT&T while increascosts for AT&T while increa-ing them for specialized carr-ers. Result: The telephone con-pany should have little troub-retaining its downant position retaining its usually commu-

On the local level, higher (Continued on Page 48)

#### **AST Releases** Four Products For IBM Micro

IRVINE, Calif. - AST Rearch, Inc. has announced four emmunications-oriented prod-its for IBM's Personal Com-

ucts for IBM's Personal Computer and Personal Computer XT microcomputers.

Developed by Orchid Technology, Inc., PCnet is an integrated hardware and software local area network. al-area network product. The

ocal-area network product. The scal-area network was de-gned specifically for the IBM ersonal Computer and Micro-oft, Inc.'s MS-DOS operating ratem, the vendor said. PCnet is based on a standard ohm CATV coaxial cable that

#### Bypass Vendor Profits Seen Mushrooming

By Phil Hirsch CW Washington Bureau WASHINGTON, D.C. Revenues earned by vend

Revenues earned by vendors of point-to-point local bypans services will grow fourteen-stold between 1982 and 1988 — from \$50 million to \$700 million, according to Jerome D. Lucas, president of Teleprategies. Inc. But ATeleprategies Inc. But ATeleprategies Inc. But ATeleprategies Inc. But ATeleprategies (DDS) revenues will increase from \$300 million to \$1.4 bil-

Digital electronic mes rvices (Dems), cable and private microwave sys-tems will account for the bulk of the bypass growth,

Lucas said.

Many larger companies are building private microwave facilities to evade increases anticipated in their local telephone rates because of AT&T's divestiture and (Continued on Page 48)

#### Processor Emulates IBM Controllers

MIAMI - Innovative Elec-tronics, Inc. has announced the MC-80/602 communications MC-69/602 communications processor. The product is said to emulate the IBM 3271 Models 1 and 2, IBM 3274-51C and IBM 3276 Models 1 and 2, IBM 3276 Models 1 and 2 communications controllers. It converts a control of the product of t

Asynchronous Ascii KSR ter-minals can be used in both local and dial-up applications, a spokesman said, Full screen mapping is performed by the MC-80/602.

Data displayed on the KSR terminal is the same as an IBM 3277/3278 display station with virtual screen sizes of 480, 960 and 1,920 char. All screen for-

matting capabilities are sup-ported, including protected and unprotected alphanumeric, nu-meric and nondisplay fields

Voice Terminal Unveiled

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For 3270 Networks

#### **Davox Unveils Terminals**

MERRIMACK, N.H. — Davos Communications Corp. (formerly networking, personal compa with an IBM Personal Comp

asynchronous terminal ope gle desktop device.
The Series 811 Multi-Mode intell

The Series 811 Multi-Mode intelli-gent terminal is said to offer Ascil/ TTY communications and "Digital Equipment Corp. VTS2 terminal en-ulation. It also offers 3270 compai-bility for use with IBM mainframes. The 811 will be available in August for \$12.855 for a five-display cluster. The Series 911 Maxi-Mode intelli-

is the claster to share the Personal Congueration of the Conguerat

Features included on all the termi-nals are a 12-in. display monitor in green or amber phosphor with a 1,920-char. screen. Also featured are Dayou's Super Buttons, which allow users to perform multifunction tasks with one keystroke, according to a

#### Tab Announces Smart Terminal

PALO ALTO, Calif. — Tab Products Co. has announced a smart terminal for use in an environment of Honeywell, Inc. computers. The terminal features a 15-in. screen that can reportedly forms 80 or 132 columns wide, has three operational modes and is said to provide asynchronous and synchronous commuters.

The Model 132/15H terminal be keyboard-selected at speeds fr 110 to 19.2K bit/sec. It has an in nal clock and up to 14 keys deve to user-programmable functions,



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#### Local Bypass Service Revenues to Grow: Exec Tymshare, Inc. will em-ploy a scheme that reuses each of six frequencies eight

times; the result is 48 dedi-

me resale carriers. Many of the new private crowave systems operate the 18 GHz band, where

htennas using three bit/sec microwave i.3M bit/sec microwave channels, each serving a sur-rounding area circumscribed by a 120 degree arc. Al-though Dems, as defined by the FCC, are based largely on the use of point-to-multi-point "digital termination systems (DTS)," two of the

times; the result is 48 dedi-cated, point-to-point chan-nels, each able to transmit at 800K bit/sec, according to Lloyd Nirenberg, Tym-share's manager of radio and satellite systems. companies authorized to of-fer Dems are planning to add point-to-point capability:

 Contemporary Digital ervices, Inc. (CDSI) is exploring the use of several frequencies — among them being Multipoint Distribu-tion Service (MDS) channels, according to Don Silverman, CDSI's executive vice-presi-MDS is a specialized com-

mon carrier service, opera-tional in all of the nation's larger cities. Mainly, MDS channels carry pay TV pro-grams. Typically, they link the head end of a local cable TV network with the nearby ode of a long-haul satellite or terrestrial network that delivers the program from a remote studio. Silverman's company, CDSI, is a subsid-iary of Contemporary Com-munications Corp., the na-tion's second-largest MDS

start-up costs will be greatly

#### Cable Operators Seen Ready To Provide Bypass Service

rates will encourage bypass

— particularly by larger
companies. But Congress and
state and/or federal regula-

state and/or tederal regula-tors are likely to impose re-strictions aimed at helping local telephone companies hold on to their business cus-tomers and thereby, reduce higher local rates, Wiley

Walter Ciciora, vice-presi-dent for research and devel-opment at American Televi-sion and Cable Commun-ications Corp., the nation's

largest cable TV network up-erator, said at a recent con-ference in New York that it will be several years before will be several years before way cable TV transmis-uidely availsion becomes widely available [CW, May 9].

Ciciora was talking pri-martly about service to resi-dential rather than business dentia rainer than business users. Because virtually no system operator can afford to invest in this equipment, no one is marketing the return amplifiers needed to imple-ment two-way cable TV ser-







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Also Function as Modems

#### Interface Converters Debut

WOODBURY, N.Y. — Remark Da-com, Inc. has announced a series of Each device also supports an addi-239-to-RS-422 converters config-tional three signals in each direction, RS-232-to-RS-422 converters configured to appear to the RS-232 inter face as data terminal equipment and data communications equipment In addition to interface conversion, Models 63-35 and 63-45 per-

form the function of a pair of highspeed, short-haul modems, according a vendor spokese

Each model is self-powered via a wall-mounted transformer and internal regulation circuitry, the vendor Said. As short-haul modems, the series

63 is designed to transmit and re ceive full-duplex data at 100K bit/se up to 4,000 feet over two twisted

provided the user supplies a twisted pair for each signal, the spokesman aintsined. The Models 63-35 and 63-45 are priced at \$126 for single quantities. More information is available from the vendor at 4 Sycamore Drive,

#### pury, N.Y. 11797 IBM Micro Users Get Four Units

(Continued from Page 45) tems and has an adapter designed to fit into a single IBM Personal Com-

puter I/O slot, the vendor said.
PCnet includes a disk sharing fea-ture that allows the Personal Com-puter to share hard disk drives and printers installed on other Personal Computers. A file-locking feature al-

lows single-user applications to be converted to multiuser applications, the vendor said. Prerequisites for PCnet are an IBM Personal Computer with 64K bytes of main memory, a monochrome or graphics display, a floppy disk adapt-er and one disk drive. PCnet costs

\$695, the AST said. In addition, AST announced AST-BSC, a communications package for Binary Synchronous Communica-tions IBM 3270 emulation.

The AST-BSC package provides all the facilities of an IBM 3270 or 2770 the facilities of an IBM 3270 or Z770 terminal. Added features include the ability to operate the IBM Personal Computer as an IBM 3274 Model 51C control unit, an IBM 3278 Model 2 display station, an IBM 3279 color display station or an IBM 3287 print-

er. Optional features include emula-tion of an IBM 2770 batch remote job entry terminal and a cluster control-ler with support for additional IBM Personal Computers or Ascii termi-nals. The AST-BSC feature costs \$895, the vendor said.

Also announced was the Plusmo-dem, a modem card for the IBM Pernal Computer or Perso er/XT.

er/XT.

It consists of an integral Bell 212Acompatible, 1,200 bit/sec direct-connect modern that is designed to offer
autodial/autoanswer modes and can
automatically select transmission
rates. In addition, the Plusmodern
has provisions for an IBM-compatible extra soci

rates. In dischool, the Planachers and Addition, the Planachers Center Street Stot Bell and perfect the Planachers come from 1907. The Planachers come from 1907 and perfect Adjustment Planachers Center Stot, the Advanced and Street State Street, and the Adjustment of the MS-DOS operating system control of the MS-DOS operating system control of the MS-DOS operating system and perfect MS-DOS operating system of the MS-DOS operating system of the MS-DOS operating system and perfect MS-DOS operating systems and MS-DOS operating systems an

MONTR: DOS/VSE System status. Imance measurement, POWER/VSE in and entry ORT display system.

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Braegen's Way Puts True 16-Bit

Personal Computing Inside A Low-Cost, 3274-Compatible Cluster Controller. Several companies now offer personal computing apability as part of their 3270 terminal package. Their pproach, however, has built-in problems—primarily

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en as our insporting sales and service network are at three persuasive reasons why. Put Braegers's way to work for you. Call or write The reagen Copporation, 20740 Valley Green Drive, Cuper-no, CA 9504 (406) 725-1252; TWX: 910-336 7332.

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#### Combination of Fine Tuning and Vision

### Specialists Detail Successful Networking Plan

By Katherine Hafne CW Staff ANAHEIM, Calif. — Plan

ANAHEIM, Calif. — Planning for network services requires a combination of fine tuning to user needs, a good idea of what is available and 20/20 vision into the future. Such was the belief of participants in the recent National Computer Conference session on network services planning, which brought together communications specialists from AT&T and DMW Group, Inc. "We've seen networks grow from

The price of the processor is \$8,500 from the vendor at 2710

Walsh Ave., Santa Clara, Calif. 95051.

of participants simple to highly structured architeconal Computer tures," John King of DMW Group in networks ser-chibrought toons specialises (Croup, Inc. 1986) for the property of the prope

Planning for network services, or network modeling, King said, depends on the particulars and needs of the network involved. At best, network planning is a black art, he noted, adding, "Networking is more than providing a hunk of coble: it is encompassing an entire range of capubilities." The nature of networks is changing so quickly that "whatever we say today will be highly modified tomorrow. Even users, for example are seeing a need for huge amount of bandwidth," King noted.

Technology controls our planning, according to panelist Bob Lawrence of AT&T. Today, 50% of metropolitan areas have digital capability, which will increase about 40% by 1990. Lawrence predicted that in many places, fiber will replace copper and that AT&T customers will

ask for ever wider bandwidths.

But AT&T is limited by regulations imposed by next year's divestiture and the creation of subsidiary
operations, which hampers communications among divisions of the
company, Lawrence said.

#### Graphics Processor Released For IBM SNA/SDLC Users

SANTA CLARA, Calif. — Versatec, a division of Xerox Corp., has introduced a graphics network processor that sends and receives Ebedic or binary data in IBM Systems Network Architecture (SIM) networks using IBM's Synchronous Data Link Con-

trol (SDLC) protocol.

Operating as an IBM 377X remote job entry station, the processor features operator console support, duplicate character compression and SNA standard interleaved communications that allow simultaneous op-

eration of multiple logical devices.
Under the SDLC protocol, communications with the host via synchronous moderns or direct connection to an IBM 3705/6 communications controller permit transmission of large data blocks to

#### Datavox Unveils Deskset Unit

MERRIMACK, N.H. — Datavox Communications Corp. has anrounced an Ansii 3.64- and IBM 3270-compatible multifunction deskset said to provide single-button ac-

ces to most computer systems.

Designed for use by executives, professionals and other knowledge workers, the Extended Multifunction Desister also features an integrated intelligent telephone. The unit also functions as a dial-up Aucif teletype-writer terminal for access to outside time-sharing, electronic mail and in-

formation services.

In addition to allowing users to dial telephone numbers automatically from a personal phone directory of up to 85 entries, the Deskset reportedly can automatically dial from a

up to 85 entries, the Deskset reportedly can automatically dial from a host computer data base. The unit costs \$2,180 from the firm located at 6 Continental Blyd., P.O. Box 328, Merrimack, N.H. 03054.

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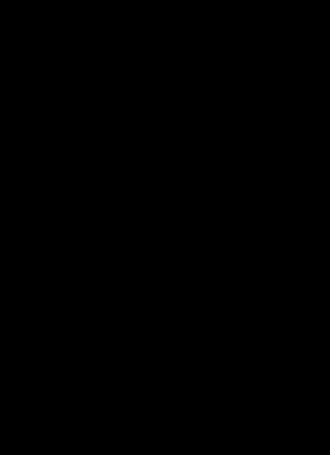
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# The Present And Possible Future DATA BASE MACHINES

By Vincent C. Rauzino

The figurative divorce between program and data, now entering its final stages, is both and data and desirable. This spit bega many years ago when data taxes woode awa from programs into independent files with names like SAM, learn and Vearn. The breaking away accelerated when data base many agement systems (DBMS) gave data we more independence by providing separati maintenance software.

Most advantages of separate filing and maintenance are obvious and welcome: the same data can be shared by many programs, the data management overhead cost is more or less predictable and can also be shared among many programs; the data can be fitted away in prescribel/promarged strings to sin-

Other advantages are less obvious but potentially far more important to the future of information processing. These advantages grow from an emerging ability to handle size as groups of totally independent quest-mathematical entities, which can be combined to yield abstract associations, correlations and even extrapolations.

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IN DEPTH

#### IN DEPTH

ter operations at imputer centers. In-

stance, in such a way that the combinations can be queried fooled by the triviality of the example — the capability is definitely nontrivial. Data Models

lations comprise the newest data model. Older hierarchi-cal and network data models are incompletely separated from their related programs because the data is linked inare called relations. Reternally by pointers into

structures called schema and subschema, and these sche-ma/subschema patterns are wholly governed by the re-

list" une ninter pointer ne relation I comme et consum e for example, is not included if none of the applications needs it), but no other rela-tionship exists between the

communications to a simp interface that can hand with equal facility specif



#### **HOW DO YOU FIND AN OUTLET FOR** YOUR COMPUTER POWER FRUSTRATIONS?



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A needs payroll data W" or general queries such as, "How many Scorpios worked on the widget project?"

The ability to build and maintain an independent data model implies that all the DBMS-related software can be safely moved to the DBMS side of the interface. The entire DBMS with its related disk files could then be treated by the host opcould then be treated by the host op-erating system in the same way as any other peripheral attached to the system, needing only some coordi-nating signals and a linguistic inter-face that can accommodate all of the

host's needs.

Continuing one step further, why not give the DBMS its own special-purpose computer? Then the general-purpose host could be completely relieved of all data-specific operations and the DBMS computer could be optimized for data-related operations. Several vendors have answered the question with data base-machines that promise to become machines that promise to become truly independent "data computers" eventually attachable to any host as a

Data base muchines have the po-tential to overwhelm all competition from software DBMS. Why, then, haven't they taken over the comput-er world? There are several good and logical reasons of the kind that al-ways surface in the gap between technological elegance and bottom-line meeticalities.

line practically.

All of the currently available data but enachine are based on the relational model, which appears to be the only model suitable at present. Two major compliants leveled against the relational model are that it strads to be slow and not an easy it strads to be slow and not an easy to the complication. And then there is the really massive task of converting data in a pointer-based model to the relational model, thus been eachines relational model. Duta been eachines the really massive task of converting that it is pointer-based model to the relational model. Duta been eachines the really massive that of converting that it is not to be converted to the real property of the property of the real property of the tal, IDMS and other DBMS users that the time and expense of conversion are worth it all. The data base machine option is thus meaningful only to the first-time DBMS user to whom all options are still open.

all options are still open.

Another potential problem is that
the utility-like separation of data
management from the mainstream of
DP operations may cause a real split
between DP and data managers and
thus encourage contention instead of
cooperative independence. Unfortunately, no technology yet discovered
can solve these kinds of people prob-

#### Basic Types

There are basically two ways to build a data base machine. One way is to start with an existing DBMS and simply offload chunks of its software

'Why haven't data base machines taken over the computer world? There are several good and logical reasons of the kind that always surface in the gap between technological elegance and bottom-line practicality."

tracted-function" approach was ap-plied most notably by Software AG

The second way is to build a new DBMS around dedicated modules of computer power designed solely to

The first commercially available implementation of a "dedicate function" data base machine was it IDM 500, introduced by Britton-La Inc. in 1980. The data base machine survey that appears later in this arcle offers short analyses of six commity available dedicated-function.

The inherent advantages of da se machines are gradually comin to focus. Their major advantage is

#### What did Bell & Howell sacrifice in designing the new 6600 cut fiche COM printer?



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of course, the ability to offload practically all of the data management function from a host. The host is relieved of three burdens: the need to build and maintain large data files on disk, the

need to allot some portion of memory to DBMS software and the need to assign some portion of CPU time to execute the simpleminded compare/sort/merge operations that constitute the majority

"Hyatt was a pioneer of local area networks."

of the data retrieval chore.

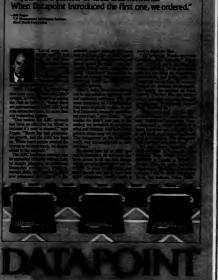
A less obvious but just as potent advantage derives from the nature of the data base machine interface relative to an independent data model. The interface can be

designed with high levels of intelligence to enable it to accept any language from any host and to convert it into a standard internal form. All of the data base machines' internal operations

are thus completely consistent regardless of the hosts' differences, and the only in necessary accommodations al are to variations in protocol and format.

The data base machine can thus become a true general-purpose utility (in the sense plug) that can be considered and incidentally provide a communications among directions among directions among the communications among directions among directio

All of the data base machines discussed in this article are based on the relational data model, primarily



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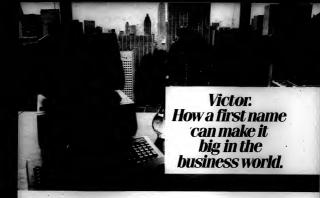
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because this model encourages re-trieval by data content rather than by data location and thus brings the data base machine technology closer to the ideally independent atate that exists between, for example, a person and a dictionary. A direct by-product of this retrieval-by-content-rather-than-by-location facility is an ability than-by-location inclify is an ability to talk to the data base in a language that more closely approximates the user's normal language. This ability is extremely important because it has the greatest impact on the end user'a perceptions of friendliness and ease of use, which are the ultimate measures of a given technology's staying

Associative Memory

The most intriguing product in the following survey is Corem's Syn-fobase, which, to our knowledge, is the first commercial implementation of a relational model connected to an associative memory, also known as a content addressable parallel proces-

sor (Capp).

power.

sor (Capp).
The concept is exciting. Imagine a block of tuples that can be "swept" by a search argument. Each tuple that matches the argument is extracted from the block and masseged formatted for the host. The search argument can be massled to do true interpolations (extract meaningful more) interpolation incomplete or ambignous interpolations.

polations (extract meningial responses from templete or analyses responses from templete or analyse responses from templete or analyse responses from templete or analyse synthesis and templete from the relief from a common store (the relievant data is extracted from the relievant data and the relievant data an

The second advantage derives rom the way the data is accessed. All onassociative techniques ultimately leid a discrete address that defines intersection in a random-access sensory (RAM) or that activates/ terts a read/write head for some dis-

crete spot on a disk surface. A phy cal address must always be de-oped to point to some real location

An associative memory also holds data in discrete physical locations, but the locations' addresses are unimportant. All of the locations are ressed" at the same time according to their data contents, but only the locations whose data contents match the search argument are acts ally accessed. The indexes and other

tive data base to translate nom generalized query to precise hysical address are effectively comressed into the search argument.
The cost barrier is simply the cost

y the cost ne cost parrier is simply the cost of memory. The entire data base should be implemented in semicon-ductor associative memory to realize the speed advantages gained through parallelism and nonindexed

quite yet practicable, but Synfobiase demonstrates that an inacpute hybrid configuration can be implemented with today's circuits. Spohobase consists of a standard data base in the relational model stored of disk. The tuples are constrained to disk. The tuples are constrained to 255-byte limits. The tuples are transferred to a separate Rk-byte associative memory in blocks of 32. An blocks of 102. An blocks of 102. An blocks of 102. An other accounts are the standard and the sta

stem's use. All 32 256-byte "super words" are

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mentally with process is repeated.

The implication is that the words are transferred onested of the entire dusk here for further profile issue flow through the gand formatting. As32 tuples are damped sponce to each query. Combine memory, and the gives a dach query.

memory transfer rate of 150K to 200K byte/sec, which means it would take about a minute to sweep a 10M-byte file. Obviously, relevant re-lations could be preselected through a dictionary, but

indexes into an ideally in-dexless data base. The end result is a partial-The end result is a partially indexed, partially associa-tive data base that can proba-bly work very well for small

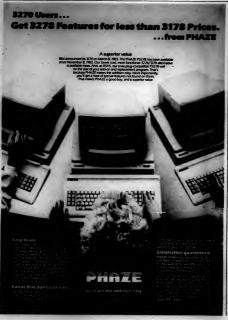
Following is a survey of data base machines from six companies: Britton-Lee, Mega/Net Corp., Intel Corp., Amperif Corp., HDR Systems, Inc. and Corem.

#### Britton-Lee

Britton-Lee's IDM (Intelligent Data Base Machine) was one of the first extracted function data base machines to appear on the market. It was originally offered exclusive to develop the host driver software to accommodate the IDM communications protected and host parts are to develop the software to accommodate the IDM communications protected and host parts software to translate user commands to translate user commands much the internal IDM formation.

Lee currently claims about 125 IDMs installed and op-ating on a variety of maintrames and minis.

re. The interface can be ex-inded to handle up to 24





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interface can be expanded to accom-mode up to 64 hoats. The IDM 500/1 darid 244-byte momes with a stan-darid 244-byte models have an All of the IDM models have an identical data base processor, which is a dedicated micro with hardware and isoftware optimized to escuize DBMS functions. The data base pro-cessor is the functional equivalent of the kernel in a software DBMS.

which is another special-purpose mi-cro with a three-stage pipeline archi-tecture and an advertised 10 million instruction per second (Mips) execu-tion rate. It can initiate disk opera-tions and can search disk pages while the pages are being transferred into memory. The accelerator allows meet

the sedious compare/sort/merge tasks to be moved even closer to the disk interface to filter out query-rele-vant data before the data is submitted to the data base processor. Britton-

Lee claims that the accelerator car improve IDM operations by a factor of up to 10.

Auxiliary IDM facilities are parable to the facilities supplied by standard software DBMS. Each IDM version comes complete with an is version comes compared with an inte-grated data dictionary, a transaction manager, audit logging, an access control mechanism and an on-line dump facility to support backup/re-covery tasks. The IDM elso supports random-access nonrelational fil

storing program and text data.
The IDM 300 and 600 systems are based on the IDM 200 and 500, re-spectively. Each system is supplied complete with all the necessary driver and parsing software plus an online query capability, a data entry facility, a report writer and interfaces to application programs written in Cobol, Fortran and C.

Cobol, Fortran and C.
Pricing and support. Britton-Lee
quoted the following single-unit
prices for IDM products as of March.
IDM 200/1, \$35,000; IDM 500/1,
\$00,000; IDM 500/2, \$85,000; IDM
300, 584,500; and IDM 600, 579,500.
The IDM 300 and 600 are delivered
with an unconditional 90-day warranty. Annual maintenance contracts
are available.

#### Mega/Net

Mega/Net
The Mega/Net Detributed Data
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Ruse Mackine: is built by Digital
Ruse Mackine: is built by Digital
and markend through a deficient
outlet called Mega/Net Corp. DAC
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placement.
Mega/Ne is an intriguing application of the independencies derived through an implementation of the relational model. DAC confidently relational model. DAC confidently usually less likely less than operate comparations of the place of the pl

DAC offers some impressive s to back up these claims: compatibility with X.25 and Xerox Corp.'s Etternet, up to 16M bytes of main menory, up to 500G bytes of disk storag

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(though apparently possible, note that 480 disk drives are needed to reach this impressive figure), up to 850 I/O ports and up to 128 commu-

850 I/O ports and up to 128 communications lines. (PMS) catalide, Action/CS (Aros), It consists of a relation/CS (Aros), It consists of a relation/CS (Aros), It consists of a relational data base, a date management language (S Baici, a spury language relational DMS) as a braine (see technical summary on in Depth 138, exhibit a property of the control of the contro

genres.

Fricing and support. Mega/Net can be purchased or leased. The purchase price range is \$68,000 to \$350,000. Domestic purchases are vendor supported; European purchases are third-party supported.

Intel

Intel is a corporate embodiment of the "lighthing growth through-technology" phopiomenon that seems to describe every computer-related startup since 1990. Between 1979 and 1982, Intel's net revenues 1979 and 1982, Intel's net revenues 1970 and 1970, Intel's net revenues 1970, Intel

Computer, Inc. come quickly to mind — have qualed or bettered having in the mind — have qualed or bettered having mind — have qualed or bettered have been as a fact of the mind with the mind of the

sonality" software, which translates to drivers and parsers, again in the Britton-Lee style.

The Idis 86/735 is also a data base engine, but it is intended strictly as an extension to the System 2000 DBMS. The premise is interesting. The Idis permiss users he outract DBMS. The premise is The Idis permits users pointer-based schema fro tem 2000. It then automate mats the schema data int The general effect is the given a microprocessor-b

tem 2000 schema. Idit is thus la a passive extension to System 2. The Idis operating environm provided by Xenix (Microsoft, upgraded version of Unix), supports the C programming guage. Idis also supports Cobo Fortran. An IBM 3270 pass-thoption currently permits use (Continued on in Depth/19)



# THE BEGINNING OF A REVOLIT



In 1876, we had an idea that changed the way America does business. The telephone.

At the time, people laughed at it. It was a gimmick, they

At the time, people singuistic at a new against a side of a toy, ask, or a toy, ask, or a toy, ask, or a toy, ask, or a toy, no one can imagine doing business without it.

Which is where we come in, which is where we come in, which is where we come in.

We offer telephones, and a great deal more.

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all linked by an applications processor.

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grow, the system can expand with them. Because everything is modular, obsolescence becomes obsolete.

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#### N DEPTH

### A Technical Summary of Six Vendors' Products

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Integrity Solutions, Inc.
7351 East Hinsdale Court Englewood, CO 80112 303/694-0214

#### Britton-Lee, Inc. 90 Albright Way, Los Gatos, Calif. 95030

a: OEM: IDM 200/1, 500/1, 500/2; end user: IDM 300/600 cets supported. OEM products: any host; end-user products: DEC PDP-11 and VAX computers under VMS or Unix.

#### E IDBP 86/44X, Idia 86/735

. IBM, Control Data Corp.

#### IN DEPTH

(Continued from In Depth/15) do multilingual compilations on the host. The basic Idis hardware package is aup-plied with 768K bytes of-main memory, 35M bytes of-winchester-type hard disk and a 1M-byte floppy disk. Communications interfaces are 85-232C and 20-mA cur-rent loon

Pricing and support. The Intel products are still rela-tively new, evolving config-urations with correspond-ingly evolving prices. The IDBP products are in the range of \$60,000, and the Idia products are in the range of products are in the range of \$35,000. Ongoing support is available from Intel.

Amperif

rent loop.

to the IDM 500's accelerator.
The accessed data is handled by the data base processor, and only the query/call-responsive results are submitted to the host. All data base structuring/

#### If you want your IBM PC to communicate with your IBM mainframe, here's what you need:

Requirement	Who has it	Who cisc has it	
Hardware and software package with circuit board which fits slot in IRM PC and IRM PC-RT	FORTE PC78-2"	IRNA"	
Emulation of IBM 3278-2 for PC access to IBM mainframe's database	FORTE PC75-2	IRMA	
Development tools for custom file transfer	FORTE PC78-2	TENA	
High-speed on-board microprocessor will not burden PC's microprotessor with communications responsibility	FORTE PC78-2	IRNA	
Resident start-up diagnostics assure there will be no network contact or couxinf connection unless the PC and interface board pass the self-test	FORTE PC78-2	IRNA	
NS-DOS compatible Anynch on board RS232 script communications interface for printer or modern	FORTE PC78-2	IRMA requires separate board	
All others for communication processor and for the 37th conduct are on disletter enhancements and experted with its new terminal enablation and new terminal feature support (i.e., custom file transfers) are made by new disletter release— which can be instructed by users either than technicians.	FORTE PC78-2	TEMA over PROSE memory — PC cubsset must be open to upgrade femoure on siterface loard	
Externally visible status indicators (five LEDs) provide visual confirmation of communications actority for both coax and RC322 interfaces. Particularly helpful on instillution and problem determination .	FORTE PC78-2	With IRMA, one LED can be examined by opening PC's cabinet	
Error checking via Byte Parity for on-board communications buffer provides consistency in the certor checking system from the cluster controller to the PC, insuring that the communications board could never be a weak list in the error-checking system.	FORTE PC78-2	NOBODY	
* Extensive diagnostics supplied. Messo-driven installation diagnostics as well as remote diagnostic capability (provided via on-board RS-S2 interface). Problem determination through phone lines rather than on-view visits.	FORTE PC78-2	NOBODY:	
Board address selection is switch-selectable (resolving potential conflicts with non-IBM boards in your PC)	FORTE PC78-2	NOBODY:	
Affordable price for single units.	FORTE PC78-2 \$1,395.00	TRNA \$1,195.00	
Immediate availability	FORTE PC78 2 is shipping product now	IRMA is shipping product now	

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#### IN DEPTH

minimum (two-disk) configuration. Ongoing support is available from East and West Coast service centers.

#### HDR

HDR is not a well-known compa-ny in DP circles but is a very well-known, multimillion-dollar compa-ny in the business of architectural ign. A couple of years ago, HDR nt shopping for a data base for its

tectural business and eventually d on Britton-Lee's IDM. At me point during their association. OR asked why Britton-Lee had not t a general-purpose driver/ ser interface for the IDM. Brittonwas apparently not interested licensed HDR to build one d an IDM kernel. The result

was Noah.

The body of Noah is any of the IDM 200 or 500 configurations, including the data base ac

tion. The HDR-designed portion of Noah is a query processor, which is an independent microprocessor-driven unit that accepts RS-232C or driven unit that accepts RS-232C or IEEE 486 communications from any host, passes the host commands data through a Structured Query Language (SQL) panser and accesses the IDM. On the return path, the query processor formats the IDM data into a host-acceptable response for delivery through the communications interface. Noah can be supplied with

up to 12 query processors. in addition to HDR's cor

us to 12 query processors.

SQL passing professors (1804 to 5QL called SQL) to a superior of 1804's SQL called SQL) to a superior of 1804's SQL called SQL SQL cal

Arcnet. A gateway processor costs another \$14,500 or \$39,500, HDR provides training and support for ad-ditional fees.

#### Corem International

Synichase from Coren Inernashe implementation of succutive
memory techniques applied to a relational model have pointed out that a
true (complete) implementation of
succitive memory. The Coren techational model have pointed out that a
true (complete) implementation of
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succitive memory. The Coren tech
tech-Synfobase from Corem Intern.

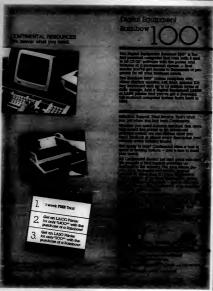
sang in in present form for larger computers.

Pricing and support. The 5M-byte version of Synfobase costs \$7,600, the 10M-byte version, \$8,900. They can be leased for \$600/m and \$700/mo, respectively. Service and mainte-nance are priced separately.

About the Author

ADOUT wire reaction.
Vincent C. Reuzino is new product de-telepment manager for Date Decisions in Cherry Hill, N.J.

The material in this article is based on information in Software, a monthly up-dated looseled information service.



#### Reflects 20% Drop in Memory Costs

## IBM Cuts Prices, Maintenance Charges

WHITE PLAINS, N.Y. — 18M has announced decreases in the purchase price and uninsum maintenance charges for selected models of its 3033, 3081, 3083 and 3084 processors and the 3082 processor controller. The firm also has cut the price of its line of 3350 direct-access storage de-

of the line of 3300 direct-access storage de-The system price reductions reflect a 22% decrease in the cost of incremental 22% decrease in the cost of incremental productions and the cost of incremental reducty has dispepted from view, the cost of incremental reduction of incremental price of incremental reduction of incremental reduction view, the overall prices of an about the cost of critical view, the cost of incremental reduction of the cost of reflective May 23. Moreover, the viril decrease from \$1,600 to \$1,200. The viril decrease from \$1,600 to \$1,000. The viril decrease from \$1,600 to \$1,000. The viril decrease of the current \$1,200. The viril decrease from \$1,600 to \$1,000. The viril decrease from \$1,600 to \$1,000. The viril decrease of the current \$1,200. The viril decrease from \$1,000 to \$1,000. The viril decrease of the current \$1,200. The viril decrease from \$1,000 to \$1,000. The viril decrease of the current \$1,000 to \$1,000

Monthly maintenance charges report-edly have decreased about 15% for IBM 3081, 3083, 3084 and 3033 processors and 3082 controllers. The effective reductions range from 11.7% to 14.8% for 3080 series processors and approximately 11.5% for

ample, minimum maintenance charges for the IBM 3033 Model S4 will decrease from \$4,145 to \$3,525. For the 3033 Model M16,

## Centronics Offers Band Printers. **Enhances Matrix Printer Line**

By Bob Johnson
CW New York Bureau
NEW YORK — Centronics Data Computer Corp. has introduced a series of line
and printers as well as additions to its exstrict line of documents.

band printers as well as additions to its es-isting line of dot matrix printers.

The Linewriter 400, first in Centronics' new series, offers a full range of print bands including statistical bands in 45, 46, 96- and 128-char sets. The printer utilizes linear free-flight print hammers at low band speed, which strike the paper at right angles, producing better quality

printing, according to the company, build-in self-dignostics are standard on the Linewriter 400, as is a compressed in either a 10 chair, in or 15 chair, in for-mat. Cost for the Linewriter 400 is about 55,000, and is will be available this local. The two end-user additions to Centron-tor Printstation 305 series of dor the printers include Models 337 and 386. Model 337 is a heavy duty, high-speed, Model 337 is a heavy duty, high-speed, Di-oriented printer designed to print at (Continued in Fige 42).

## A.B. Dick, GEC Join to Develop Supermini

CHICAGO — In a joint development effort, A.B. Dick and fellow General Elec-tric Co. subsidiary, GEC Computers, Ltd., have produced an OEM-oriented super-nition mayber being at most at both orienmitticomputer being aimed at both scien-tific and commercial applications. Capable of supporting up to 256 terminals, the MC-30 processes 2.8 million in-structions per second (Mips) when used in business environments. Depending on the configuration, the 32-bit system costs be-tween \$40,000 and \$100,000.

According to the firm, achieves its processing speed through an

simultaneously via a four-stage pipeline. The instruction overlap, or pipelining, is accomplished by separating each instruction into four phases: instruction fetch, address preparation, operand fetch and exe

cution. The modularly designed machine sup-ports a mix of up to 11 memory boards (1M byte each) and channel controllers (disk and tape handlers and local system multi-plexers), the company said. A single disk controller handles as many as 32 spindles and a tape controller up to eight tape han-dless that the said of the said of the said of the multiplexers supply a controller of the said of the said of the policy and the said of the said of the said of the policy and said of the said of the said of the policy and said of the said of the said of the policy and said of the said of the said of the policy and said of the said of the said of the said of the policy and said of the said ces and system timers The system uses 64K-bit dyr

dom-access memory chips and a memory subsystem expandable to 16M bytes. Com-patible programming languages include C. Pascal. Basic, Fortran and Cobol, plus a relational data base management system retational data base management system and applications generator. All languages can be executed under Unix and Whitesmiths, Lid 's Idris operating systems. The system is expected to be available to OEMs in August, both through A. Dick Systems Products Division and the

London-based GEC Computers Ltd., an A.B. Dick spokesman said from 5700 W. Touhy Ave., Chicago, Ill. 60648.



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Page 61

# To Add Terminals

WESTBORO, Mass. -Data General Corp. has Data General Corp. has announced upgrade avail-ability for its CS/40 and CS/60 computer systems that allows both systems to handle more terminals.

The upgrade reportedly allows current users to add more terminals and

achieve more processing power by migrating to the firm's CS Series 200 sys-

tem. The 2008 allows as many as 25 terminals to be nected - a 16-terminal and nine-terminal increase over the CS/40 and CS/60, respectively.

The cost of upgrading the CS/40 CPU is \$22,000. the CS/40 CPU is \$22,000, and the CS/60 can be up-graded for \$10,500, a spokesman said from 4400 Computer Drive, West-boro, Mass. 01580.

### DG Upgrades CS/40, 60 Hotsite Provides Disaster Backup

NILES, Ohio - RMI Co. has announced the availability of an IBM 4300 facility dicated to disaster recovery backup service for users

small and medium-size Designed to accommodate 100 users, Hotsite is fully equipped with an IBM 4341 oup II computer, tapes, disks, CRT terminals and

communications equipment, which reportedly will be available whenever a subscriber experiences a com-

uter emergency.
The facility is said to feature a security system with 24-hour guard service, remote tele vision monito on the site perimeter and a magnetic-card entry system. Inside, there are heat, smoke and water detectors; a fire protection system; and surreillance cameras. Also, the Hotsite power system was

#### System Out For Horizon

SAN LEANDRO, Calif. -North Star Computers, Inc. has announced a new operating system for its Horizon crocomputer, the Horizon North Star Turbodos is a

multiprocessor operating system and will handle up to eight users. Deliveries are slated for August. Prices start at \$9,000 for a four-user system, the firm said from 14440 Catalina St., San Leandro, Calif.

Line Printers

(Continued from Page 61) 400 char./sec. Character gen-eration is seven by eight dot

matrix with true ninth pin derlining

throughput is over 350 line/ min for 40-col, lines, Centronics said. It will also be available this fall and is priced at \$2,995. Model 358 is a dual-mode printer providing bidirec-tional draft, multipass corre-

tional draft, multipass corre-spondence-quality printing and four-color or seven-color print capability. It also in-cludes an LCD with printing status and features selection and a rotary ribbon shifter

system. It will be available this fall for \$3,595.

signed for the Model 358

Introduced

designed to be uninterrupti-ble and to incorporate battery backup. A helipad, plus a location within an hour from two major sirports, pro-vides immediate access in an

Subscrit pay only for the size of the system needed and are en-couraged to test the facility on a regular basis in accor-

offered. Subscription to a backup site can qualify the user for a reduction in insurance premiums for business terruption coverage,

Depending upon custom-er requirements, monthly charges range from \$1,000 to \$3,000, the vendor said from 1000 Warren Ave., Niles Ohio \$4446. dance with their needs. On-



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designed for the Model 358 was also snnounced. It is controlled either by a host computer or through the printer's control panel. It is also available this fall and is

#### **LEARN CICS** THIS SUMMER

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#### DECsystem-10/20 Users.



#### Mainframe Modeling at a Micro Price

IL II+ Available Now... J

#### IEEE 796 Bus-Compatible

MEDFIELD, Mass. — Co-ark Corp. has unveiled a 1/2in. magnetic tape mass stor-age system said to be IEEE 796 bus-compatible

6 bus-compatible. The MT 86 Magnetic Tape stem reportedly provides e users of the IEEE 796 bus with a mass storage system capable of direct-memory-access transfers to and from memory at a 120% byte/sec rate with 24-bit addressing. The MT 86 runs with industry-standard Digi-Data Corp. drives in either seven-or mine-track. Nonestryments nine-track Nonreturn to Zero Inverted (NRZI) or nine-track dual-density

#### Sunol System **Features** More Storage

Not only is the capacity necessed, the vendor claimed, but the transfer rate a changed from 5M to 7.5M bit/sec. A 7M-byte disk costs 11,995; a 14M-byte disk costs 12,495; a 21M-byte disk costs 22,995; and a 44M-byte disk costs \$4,495, all formatted,

the vendor said.

The firm can be reached through P.O. Box 1777, 1072
Serpentine Lane, Pleasanton, Calif. 94566.

#### Subsystem Fits Series/1

## Comark Unwraps Storage System

125 in./sec are available

face card. When connected to the Digi-Data formatter, the system reportedly is capable of controlling up to eight transports. Transports are available in 7-, 8%- and 10%-

Prices start at \$5,170 for the MT 86/7980. Comark is located at 93 West St., P.O. Box 474, Medfield, Mass.

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#### Daisywheel Printer Available In Parallel, Serial Formats

Now, get a complete communications package in just one package.

#### **IBM Cuts CPU Prices**

(Continued from Page 61) \$6,570 to \$5,825. For the IBM



#### Momentum Offers Version Of 32/4 Supermicrocomputer

omputer. he alphanumeric 32/4 is r and features direct mem-

The computer is priced at \$9,995 for single quantities from the vendor at 965 W. Maude Ave., Sunnyvale,

## Pen Plotter Out for IBM Clusters

#### **EDS Unveils** Update Of Its 290

ectronic Data Systems, Ir OS) has announced an e-inced version of its 290 m ocomputer-based termina at will be used with th

le line or character pri nd support for Digital earch, Inc.'s CP/M op

A company sp d the EDS 2900 ermation System, but it ca so be used as a stand-alon microcomputer of under CP/M. The EDS 2900 is o

ble with existing Model terminals and costs \$8,5 the vendor said from \$ 150, 12747 Otive St., Be ive Corporate Cente Creve Coeur, Mo. 63141

F Case Co



#### Introducing PC Express.™

Until now, if you wanted a complete communications package for an IBM\*PC, On the land of your wanted a complete communications package for an IBM\*PC, communication of the land of the l

IBM-compatible computer.

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productive than ever before. PC Express enables your IBM PC to communicate with mainframe computers and perform DEC VT100/52 emulation. For added versatility, PC Express is also avail-able with SNA, allowing your IBM PC to emulate a 3274 Cluster Controller, 327X and 3770 RJE terminals. For MIS Managers, that means you now have an effective way to reduce how have an enerctive way to reduce host processing and storage loads. And, for the first time, enjoy the productive possibilities of combin-ing the problem solving powers of micro and mainframe software.

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# PERSONAL COMMUNICATIONS

#### Bits & Pieces

Sola Electric Introduces Uninterruptible Systems

ELK GROVE VILLAGE, III. - Two

EX CROVE VILLACE, III. — Two newly developed uninterruptible power systems (UTS) have been inThe High Irran and in designed to accommodate loads requiring momentary current surges, and the Deverter restart plus an alarm circuit for signaling hattery operation.
Both products are said to protect protectial at power line problems, including blackouts, brownouts, transmiss and noise, the vender needs at 123-46 and \$1,800. respectively, the

vendor said from 1717 Busse Road, Elk Grove Village, Ill. 60007.

**Ink-Jet Printers Series Gets** Price Cuts, Enhancements

CHELMSPORD, Mass. — Ad-vanced Color Technology, Inc. has announced price cuts and product enhancements to its Act-1 line of col-

enhancements to its Act-I line of color ink-jet prining.

The price reductions, averaging.

The price reductions, averaging such sing the price of the Parallel such, bring the price of the Parallel Interface Act-I down to \$5,950 from \$9,900 and the price of a R5-170 Video binerface Act-I to \$8,795 from Act the same time, the vendor announced interfacing additions to the product line, including the R5-232 aparallel interface multiplexing option.

Further details may be obtained from the vendor at 21 Alpha Road, Chelmsford, Mass. 01824.

Memory Storage Unit Out For IBM Personal Computer

LOS ANGELES — A supercharger for the IBM Personal Computer, which provides random-access and transfer characteristics for up to 4M bytes of data, has been announced by CTC Electronics. CTC Quick Disc is a semiconduc-

CTC Quick Disc is a semiconductor memory storage product that appears to the Personal Computer as an additional disk drive, the company additional disk drive, the company of the company disk drive, the company disk drive, the company disk drive, the company disk drive, the condition with existing Winchester disks and floopy drives, according to a vendor spokeman. In the cache mode, frequently referenced sections from disk are retained in buffers giving access of \$512.

ter the first.

Storage capacity ranges from 128K bytes to 4M bytes with the low-end version priced at \$1,130 from 2237 Colby Ave., Los Angeles, Calif. 90054.

Cartridge Drive Compatible With Intel Multibus Systems

JESSUP, Md. — Digi-Data Corp. has announced a cartridge drive that operates as an intelligent bus slave with any Intel Corp. Multibus-com-

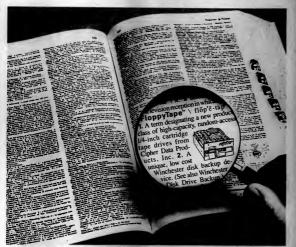
patible system.

Called the Model 70M, the Intel 8085-based controller card plugs into the Multibus and supports up to four

the Malithus and Supports up to four drives.

The manifest has a X-X-yr which a X-X-yr was a X-X-yr with a X-X-x-yr with a X-X-x-x-yr with a X-X





## The latest word in computer peripherals...

#### ...and the last word in disk backup.

The \$25-CT PloppyTape is a new class of product that provides the last word in Winchester disk dive backup with its

many unique design features. Using the standard I/4-inch tape cartridge, this innovative device combines low cost, high capacity and disk-type data accessibility to provide disk backup features with new meanings:

Low Price 1. Sells for appreciably less than any other device with comparable features. 2. Priced at \$300 per unit in large OEM quantities.

High Capacity Storage 1. Stores 32 unformatted megabytes of data on a standard I/4-inch tape carridge 2. Allows one tape carridge to replace up to 40 double-sided, double-density floppy disks.

e with important floppy disk features such as random access to sectors and soft sector formatting. 2. Allows in-place updating of information stored on the tap

Immediate Integration 1. Attaches to standard fipppy of controllers. 2. Provides plug compatibility with standard SA450 or Son 1. Attaches to standard floppy disk

py Disk Emulation 1. Configures a standard I/4-inch tape

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and use of macrocomputers primarily in smaller basi-nesses, the EMCE conference highlights:

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New and Femme Toronto in Personal Computing (Thurs. 245-5:00 p. m.) John C. Drount. Editor, "Japanilaria"

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S p.m.) aleratur Alax Survice Porture Lacrathol & Moryrett Technological Developments in Personal Computing
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ference highlights.

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na Stories Combilence (There 1 2-45 p.m.) votor: Will Zuckmann, VP, Diffect of Technology Ass naturnal Date Corporation s: (Friday, 10:40-11-40 a.m.) rt Galliure, President, LINK

er: Jon Formena. Partner, L.F. Kethschild, Unterberg, a

Horring Good Maintenance. Service & Support (Frede). 3-45

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Carler, Computer Applications Specialist, MASBO Carlip
tal Computing at House (3:20-5;100 p.m.s)
ter, South Mace, Sr. Eddin: "Implification
to Kin Komanda, Karentine Directive Educational Products
then Exthemye Institute, Karland Robassia, President,

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#### Along With Four Other OA Units

#### Rolm Unveils DEC VT100-Like Terminal

By Robert Batt
CW West Coast Bursus
SANTA CLARA, Calif. — Rolm Corp.
last week announced five office automation and telecommunications products an enhancement of its distributed digital The most notable of the five was a desk

The most rotable of the fire was a desired by personal communications terminal called Cyrens, and in function like Digital Conference of the Conference of t

of calis, trunk

#### Codex OA Line Gains Two Micros

MANSFIELD, Mass. — Codex Corp. has troduced two models in its CDX-268 line

anticitions, relecommuning and distributed office applications. The Model 25 features of 50%-byte distributed office applications. The Model 25 features of 50%-byte distributed rivers and the state of 50%-byte distributed rivers. The state of 50% byte distributed rivers are a 15%-byte distributed rivers. Both models use a Unit-like operating state called loss that allows each user to rioran different tasks concurrently. Mulsier software includes an electron readsheet, records management and processing and processing and processing and processing and processing and distributed and distributed rivers.

#### OA Developers Must Consider **Effect On Organization: Panel**

ANAHEM, CAIL— In implementing office automation systems, managers must office automation systems, managers must contribute of spinitudes of effects as well as recently of spinitudes of effects and social impacts of office automation told, as tendenes here recently at the National Computer Conference. Expenditudes the recently at the National Computer Conference. Expenditudes the National State of National S

'A relevant office of the future will drastically change the way we relate to each other as managers."

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## **Rolm Enhances Net With Five Units**

and deschable keybourd, to begin in September with The Iestern can store be river lixed in the period of the ACD 9000 system is 0.000 and 190,000. The ACD 9000 system is offered in the period of the ACD 9000 system is offered in the include large distance called significance called significance called significance called significance user of its computer conduction of the control of the contro

First deliveries of the xe-sale Manager system are due to begin in September with prices beginning at \$18,300. The ACD 9000 system is designed as an update of the company's current ACD product line to include large

The ACD 9000 contains a digital telephone equipped with a two-line LCD and can

with a fervi-like LUJ and can give users access to local and access the control of the control o

Introduced NEW YORK — Centronics
Data Computer Corp. has announced a line of fully
formed character band printers in the 300 to 500 line/min

range.

Linewriter 400 is said to offer a full range of print bands, including statistical bands in 48-, 64-, 96- and 128-char. sets. A selectable, compressed pitch capability is also available.

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\$5,000 from Centronics Data Computer Corp., One Wall St., Hudson, N.H. 03051.

#### Organization Important, Panel Says

(Continued from Pege 71)
In their study, "Advanced
Office Systems: An Empirical
Look at Use and Satisfaction," Gutek and Bikson reported on the influence of
office automation implementation in varied office settings. Twenty-six organiza-tions were examined — half in manufacturing and half in sions were examined — ball in manufacturing and ball in in manufacturing and ball in the size of \$5.00 employees. We found that while performed the size of \$5.00 employees. We found that while performed the size of the siz

tasks."

The least satisfied with the system were data-oriented workers, while the most satisfied were text-oriented workers.— people who write reports.— because the equipment made their jobs easier.

#### port Process or IBM/38?

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nore? noy. The compiler is to operate with the DEC

software toolleit on RSX-11M, RSX-11M Plus, and VAX-VAS-AME. Output is MACRO 11 code, so that C code may be intermixed with assembler and linked with the standard task build-ers TAB or PAB. An entensive sub-

ass TIM or PAR. An extensive nab-routine library is also provided for use with the our equally time-honored Pacal translator to comple your Pacal applications. We support separate compilation so you can mermite Pacal, C and assembler, for mermite Pacal, C and assembler, for lefts. Our multi-user, mais tasking operating system gives you everything, you need to develop and run applica-develop and run applica-

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THE RESIDENCE OF THE PARTY OF T

#### SIA Report Indicates Strong Sales For Semiconductor Industry in 1983

CW West Coast Bureau CUPERTINO, Calif. — Further evi

Al.

After three years of allow growth, pments of semiconductors by U.S.

Burpopean-based firms are expected increase 13% to \$10.6 billion this rat, according to the \$51.6 figures.

The report, recently published by the microsoftwich Trade Statistics Program inconductor Trade Statistics Program inconductor Trade Statistics Program inconductor Trade Statistics Program in that the industry will grow by al
at that the industry will grow by al
at that the industry will grow by al
at 40% over the next two years 40% over 1985.

Set Stillen in 86.0 billion by year-end.
The report she president that said of integrated circuits will continue to dear bearing \$20 billion in 1984 and controlling \$20 billion in 1984 and said the current year. In contrast, sails of discrete circuits on separated to week \$2.5 billion through \$1985.

The growth of the integrated circuit discrete development in severage to the circuits of the said of the circuits of the circuits of the circuit of the circuits of \$2.5 the cir

#### Some Vendors Still Hot: **Others Cooling** After NCC

Two Factions Emerg

#### VM Software's Chief Paints An Optimistic Product Future

CW Staff
ANAHEIM, Calif. — "You put all your eggs in one basket and then you watch the basket."

asket." With these words of Mark Twain, Bob ook, president of VM Software, Inc. of all all Church. Va., described the philloso-ly for his firm. Cook voiced his opinions unity an interview at the recent National mipuler Conference here, where he was made to the control of the

ilities. "VM Software was formed in 1960 to de-plop and market packaged system soft-are utilities to users of IBMs 40 dopera-g system environment. Its first product as VMbackup, released in 1981. Since en, eight additional integrated products we been introduced. According to Cook, the firm has only se serious competitor to VMbackup, (Continued on Page 82)



With BEALL Directing,

Beat

## Lawyer Says Out-of-Court Settlement Unlikely

(Continued from Page 75)
Afips' promised report will reco

mend any major restitution for the Pavilion exhibitors.

"In the end, all I think we're going to get from the show organizers is a letter explaining what happened

no money," Dempsey said.

"My guess — and this is my law
yer's cynicism coming through — it
that the organizers will try to delay

can," he added.
"They probably figure that it longer they make exhibitors with the greater the chances that they wismply forget about the whole mat and write off their losses. That's catainly what I would tell the organ

#### Could Sue Together

If Dempsey proves correct in his forecast that Afips will offer the Pavilion exhibitors little or no financial compensation, many of the vendor will probably make good on their thems to hand towards and many con-

damages.

"The exhibitors spent so much money to rent floor space and set up their exhibits that, I think, many of them would be quite willing to proceed with a suit," Dempery said.

Dempsey's sentiments were echoed by Alan Davis, Molecular Computer, Inc.'s vice-president of marketing. "We're seriously considering

#### SIA Forecasts 13% Sales Jump

growth will be digital complementary metal oxide silicon (Cmos) and digital metal oxide silicon (Dmos) logic, with both experiencing growth rates between 25% and 31% per year through 1985, the report sild. The Dmos memory market is also expected to do well, increasing from an annual control of the control 33.1 billion in 1985.

During the next three years, Hinkelman-added, demand for integrated circuit devices will be fueled by the digital Cmos sector, which will have growth rates in excess of 25% themselved.

In marked contrast to the past two years, semiconductor shipments in all geographic areas will surpass 10% growth in the current year, the SL/report said. The U.S. market will grow 14% to \$6.4 billion in 1983, 19% to \$7.6 billion in 1984 and 21% to \$9.5 billion in 1985, the report said.

In Western Europe, the semiconductor market is expected to increase 11% this year, exceeding sales of \$3 billion. Western Europe should experience growth rates of \$5% over the next-two years, topping \$4.3 billion in 1985, the report said. West Germany and the UK are expected to be the two strongest countries for semicon-

"Semiconductor Forecast 1983-1985" is available for \$100 from SIA, Suite 155, 20380 Town, Center Lane, Cuparting Calif 95014 vis said during an NCC interview.

"We paid \$50,000, excluding salaries for our exhibit personnel, to attend this show only to have visitors to our booth walk our right in the middle of presentations because they couldn'

stand the heat."
Davis' firm was said to be one of 277 vendors to occupy the Pavilion exhibit facility during NCC "83's four-day run beginning on May 16. In essence, the makeshift exhibit hall consisted of six connected lents that housed the exhibitor overflow from the Anabiem Convention Center.

Transformed Into Hothouses
The tents, pitched in the convention center's parking lot, were sup-

posed to have been kept reasonably comfortable with air-conditioning units powered by three on-site generators.

failed, and the tents were quickly transformed into hothouses.

One exhibitor, U.S. Design Corp Director Steve Blum, obtained a ther-

mometer and measured the May 18 temperature inside the Pavilion at 113°F.

The combination of withering heat and poor ventilation resulted in widespread hardware failures and

took a heavy toll on exhibit personnel.
"We had one employee in our booth who had to be flown back home early because of the heat," Da-

The sauna-like conditions we also widely blamed for what ma Pavilion exhibitors described as disappointingly low attendee turn out — a problem that apparen

floor.

By May 18, many exhibitors in the sweltering Pavilson. had exhaust their patience and were demandiated.

action.

The exhibitors quickly broke into at least two main factions, one of which met with Afips representatives during NCC and convinced them to remedy the heat problem and issue the status report by mid-june.

# THE LOOPHOLE IN



CODEX DISTRIBUTED NETWORK CONTROL SYSTEM

#### Fujitsu, Matsushita Join Forces To Design, Develop Software

OSAKA, Japan — Fujitsu Ltd. and Matsushita Electric Industrial Co. have formed a company to design and develop jointly computer.

was officially established June I and full operations are expected to start in August. Each company is contributing 50% to the \$1.3 mil-

lion venture.

Based here and employing 7
people initially, the joint ventus
will work to develop softwan
hardware interfaces and new con
puter systems. The firm will als
conduct surveys in research an

ording to Don Spetner, a span for Matushita

pony marks a return to the fold for Matsushita, which withdraw fro the general computer market i 1964. Currently one of the world largest consumer electronics cospanies and primarily a manufaturer of video equipment, Matsshita is gradually moving into the

office automation equipment au ketplace. Spetner said, as well into robotics systems. Matsushita President Toshihii

Matsushita President Toshihiko mashita is president of the new sture, and Fujitsu Chairman

#### Inman Designates Austin As Site for MCC Home Base

AUSTIN, Texas — Bobby Inman president of the Microelectronic and Computer Technology Corp (MCC), the research and development consortium of 12 technology companies, has selected Austin as its

In making the announcement, Inman said he plans to set up an office here by June 15 and begin searching for management personnel immediately. A basic management force is expected to be in place by August,

and laboratory research is slated to begin by the end of the year. While he declined to offer specific details about the Austin site, Inman office building and eventually use about 200,000 square feet of floor space in Austin. In all, MCC is expected to employ about 500 people. Austin was selected from a list of more than 57 cities in 27 states, each of which submitted proposals to MCC. Inman is a Texas native and a

MCC. Inman is a Texas native and a graduate of the University of Texas.

Xerox, Visicorp.

#### 3Com to Link IBM Micro to Net

ANAHEIM, Calif. — Xerox Corp., fisicorp and 3Com Corp., have anounced plans for a joint project to 
llow users of IBM Personal Computne equipped with Visicorp's Vision 
oftware to have direct access to serices on Xerox's Ethernet local-area

tronic printing, filing and mailing are currently shared by professional workstations, word processors and personal computers on the network. According to the agreement, Xerox will develop network applications for the Vision system, making Ethernet services accessible. Visicorp will market these Ethernet applications worldwide to run with Vision on the IBM Personal Computer and Xions will provide the direct hard-

Xerox will also work with Visicorp to implement a Vision system on a Xerox personal computer, either the A20.1 or A20.2

# Mergers & Acquisitions

National Computer Systems, Inc. dinneapolis, has acquired Compubych, a Kansas City, Mo., manufac urer of specialized microcomputer used testing systems.

int National Bank

to has purchased Comtrac, Inc. of Columbus, Ohio. Comtrac provides ransformation information services and products.

Bishop Graphics, Inc., Westlake fillage, Calif., has acquired Computr Aided Design Resources, Inc. of

Contech Telecommunications Corp. has signed an agreement in principle to acquire the operating asets of Storage Technology Corp.'s subsidiary, STC Communications Corp. for approximately \$9 million in cosh and notes and five-year avarrants to acquire 450,000 shares of Contech Contech

Data Printer Corp., a privately owned Mass. company, has become a subsidiary of Printrunk, Inc., Irvine Calif., in exchange for 210,000 shares

# MURPHY'S LAW.

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#### Supershorts

Darstech, Inc. has published a directory containing information on 60 computer-uided design and manufacturing (CAD)/CAM) vendors and 125 systems. "CAD)/CAM Computer Graphics: 1983 Survey and Buyers Guide" can be obtained through P.O. Box 410, Cambridge, Mass. 02238.

RCA's new Component and Dis-play Division will develop a line of standard and custom video monitors for consumer and industrial use, RCA's Pacture Tube Division will be absorbed by the new division.

edia Corp. has created four

Datamedia Corp. has created four independent profit centers, each with complete operations management and sales reponsibility. Company President Guy Dantello, for-pany President Guy Dantello, for-products, will continue to discretisoft-ware operations. Heading up the other profit centers are: Leonard J. Accardi. vice-president, computer systems; lake Powell, vice-president, original profit president, marketing and castomer services. tomer services.

Spectra Services has introduced a ew service, It Circles-Retail, which for an annual fee provides memb companies with a data base coveri new technology systems and ser-vices; an information search service; a "phone-in" advice service on sys-tem design, selection and implemen-tation; and a program of seminars

Centec Corp., Reston, Va., and Genigraphics Corp. of Syracuse, N.Y., have signed a long-term mar-keting and technical development agreement. The first phase of the agreement will interface the Centec Chectah software system operating on the IBM Pentonal Computer with the Genigraphics high-resolution film recorder.

Prime Computer, Inc. has signed a contract with Ford Motor Co. to market the Product Design and Graphics System, a three-dimension-al wire design and drafting system originally developed by Ford for curved or free-form surfaces and what the time to the next file. used by the company for the past 10 years in automobile bodies. The sysyears in automobile bodies. The stem has been generalized to be approable to structures, mechanical co

Commodore International Lid has formed the Commodore Soft-ware Division and has named Sig-mund Hartmann, formerly of TRW, Inc., as division president.

The Computer Science Department of Brandeis University has received \$4 million from Mark Michtom, former executive with the Ideal Toy Go. The gift, which extends over a period of years, will be used for a Michtom Chair in computer science and for expansion of the department.

Convergent Technologies, Inc.

The seventh edition of the "Guide
agreement to self in computer spepositions to good in computer spepositions to good in computer spepositions of good in computer spepositions of good in the selfstream to Good in Control of the Section of Condistream of Good in the Section of Condistream of Good in the Section of Condistream of Con

Syracuse University's School of Computer and Information Science has received an IBM departmental grant of \$25,000 for outstanding competence in the area of logic pro-gramming, a branch of artificial in-telligence that enables computers to reason deductively and solve sym-bolic problems.

Keane, Inc. of Boston has donated its new factory information system. Improon, to Soston's Channel 2 Auction. Auction manager Edythe C. Baker called the gift, valued at 575,000, the single most valuable donation ever made in the 18-year history of the auction.

Gould, Inc. has formed the Micro ower Products Division, which will ssign, develop and manufacture iniature power products for elec-onics applications.

Digital Equipment Corp. has do-nated a DEC 11/4 general-purpose minicomputer valued at \$60,000 to the Management Information Sys-versity of Aironas. The award sys-versity of Aironas. The award sys-of a continuing program of corporate contributions to the university that started in January 1981 with the saward of \$130,000 toward the pur-chase of a DEC VAX 11/780 for the MIS department.

Prime Computer, Inc. has donated a Prime 850 computer with six workstations and a Meduss software system, valued at more than \$500,000, to the University of Virginia's School of Engineering and Applied Science.

American Express Internation
Banking Corp. will participate w
Anacomp, Inc. in the developm
and implementation of three has
ing software applications — glo
customer liability, document
credits and collection and glo
funds trading/tressury.

against Mohawk Usta Occasional
Corp.'s subsidiary, MDS Quartel, Inc.
The action, based on an alleged
wrongful termination of a distributorship agreement, was brought in
1979 against Quntel Corp., which
was acquired by Mohawk Data Scius a solor.

Oracle Corp. has formed an appli-cations products group that will pro-vide microcomputer versions of the Oracle relational data base manage-ment systems to software OEMs, sys-tems houses and others developing

# Senate Begins Hearings on Copyrights for Chips

Difference of Opinion





# Apple to Donate Micros to 9,250 Calif. Schools

# Nickels



#### Demonstrated at NCC

## Apple Seeks Substantial Bite of Mid-Size Nets

By Bruce Hoard CW Staff

ANAHEM, Calif. — Apple Computer, Inc. is taking a bite out of the local-area newwork market's new mid-size niche, according to Wayne Rosing, director of engineering for Apple's Personal Of-

In an interview here at th

Conference, Rosing di cussed current and future a pects of personal comput local-area networks. Until r cently, Rosing said, loca area networks have been de vided between high-en high-speed offerings, such He listed Corvus Systems, Inc. as an example of the latter.

Apple last year unveiled Applement, a local-area mework that can link from two to 128 computers. It was designed to fill this mid-size niche which, Rosing said, is comprised of work-area meworks. Such networks typitransmission speeds and ar restricted to departments of single office areas.

Apple showed and demorstrased Applenet for the first time at NCC. The system was running on its Lisa office personal computer. Apple's director of engineering said that the firm is looking to Ethernet as a stanand that technical details on Applenet will be made public just as Ethernet specifications were released to the public by its co-developers — Xerox, Digital Equipment Corp. and Intel Corp. The company is also moving to make its products compatible with Ethernet, having commissioned XCom Corp. for that work.

Nets Encouraged

Initially, only Apple computers, such as Apple Ile, Apple III and Lisa, will be compatible with Applenet. However, Rosing made it clear he hopes other vendors will develop interface products for other personal computers—moet notably, IRL's.

"We hope other vendors will add to the network, too, especially those who will add value." he stated.

Asked to comment on the intrusion of personal computers into the tradition. CRT terminals market, he said CRT terminals remain the best tool for large-scale dat base operations. However, CRT terminals are threst end by personal computer in such highly interactive applications as word processing, software development.

The moot-mentioned CR terminal targeted for extinction by the personal conjugar invasion is IBM's 327 line. Rosing commented." be worried if I was in the 3270 division of IBM." He also claimed that the style of a combination CR1 termina and cluster controller is already obsolete, but will life on because of its large in stalled base.

#### Time's Immedia

Kosing made it clear the Lisa is highly important of Apple's future. Referring it the \$10,000 product, he said "We have a very large stak in Lisa. We've played 'yo bet your company' on it be cause that's the way Appl likes to do it."

> Lisa were double what the company expected for the entire year, he claimed. He said it is not possible to

> entire year, he claimed.
>
> He said it is not possible transmit Lisa graphics to the firm's Apple II, IIe or Appl

The Xerox 8010 Star wor station has a similar proble transmitting graphics to X rox 860 personal computer Rosing said the problem that Lisa employs a momodern architecture that Apie Bis and Ills architecture that Apie Bis and Ills architecture fitted with older technologin order to send graphics them.



#### Orders & Installations

Deta General Corp. will install a stionwide integrated office net-ork based on its 32-bit Eclipse pro-stor for E. Hutton & Co. The or-er is valued in excess of \$40 million.

Megatek Corp. has been awarded a contract valued in excess of \$50 million to sapply graphics terminals to McDonnell Douglas Automation Co.'s Computer-Aided Design and Manufacturing Division.

NCR Corp. has received a \$1.5 illion order from Citizens Federal vings and Loan Association for an CR 5000 branch automation sys-

awarded a multimillion dollar con-tract by Apothetech, Inc. for 200 mi-crocomputer systems based on the Motorola, Inc. 68000 processor. Apothetech plans to install a total of 3,000 systems nationwide over the next five years.

Harris Corp. has signed distribu-tion agreements with Utelcom, a sub-sidiary of United Telecommunica-tions, Inc., and Value-Line, a division of Business Telephone Systems, Inc., for its digital switching systems.

Sperry Corp. has received an \$18.7 million contract from the U.S. Navy for 18 Sperry 1100/60 comput-er systems and 22 distributed com-

Compucorp, Inc. has received a \$ million order from the U.S. Depart ment of Justice for 200 information rocessing systems.

Sperry Corp. has received a \$7 million order from Computer Disas-ter Recovery Corp., Rochelle Park, N.J., for a Sperry 1100/82 system.

Scientific Systems Services, Inc. has been awarded a \$13.4 million contract to provide a computer-based monitoring system for Northern

States Power Co. in Minneapolis. Wang Laboratories, Inc. has re-ceived an order from General Electric Co. valued in excess of \$20 million for office automation equipment.

#### **Exec Foresees Bright Future**

(Continued from Page 75)
which is installed on approximately
435 machines. That is Syncsort, Inc.'s
recently announced Syback offering.
Cook said his firm essentially got the
jump on other companies by recognizing the potential growth of VM

niting the potential growth of VM search how he was predict liter assignment with the product liter assignment has been product liter assignment has been product literature of the horizontal product literature and the increasing interest of his customers in interactive systems. With the customers in interactive systems, which was a search of the product literature and the literature of t

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applications are endless.

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## Micro-Mainframe Links Draw Crowds at NCC

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The restriction of the microcomputer arena may prove to be the drawing cards many mainframe software vendors have lacked at hardware-oriented shows, such as the National Computer Conference, if the year's NCC was any indication.

When NCC was held here When NCC was hest nere last month, there was plenty of activity at the booths of those software vendors an-nouncing or showing micro-computer-oriented products frame linking product, was on display at On-Line Soft-ware International, Inc.'s (OLSI) booth, It drew a lot of

Alice Kessler, assistant vice-president of promotion for OLSI, said the flurry of activity around the booth has provided the firm with names of new companies to contact. Although, she has yet to confirm whether the

nd one for OLSI. She al-dy is making plane







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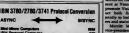
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#### **Executive Corner**

W. Paul Warnock has been ap-pointed vice-president of finance and treasurer for Wicas Systems, Inc.
 William M. Gibson has been appointed president and chief execu-tive officer of STSC, Inc.

Lus Turndal has been promoted to president of Memorex International and appointed a vice-president of Burroughs Corp. Memorex Corp. is a subsidiary of Burroughs

Corp.

— Richard J. Tata has been appointed vice-president of operations at Corono Data Systems. Inc.

— \$ Jack R. Reynolds has been at Corono Data Systems. Inc.

— \$ Jack R. Reynolds has been for Tandon Corp.

— Murray H. Bolt has pioned Cover Corp. as vice-president of network control products.

— \$ Stephen L. Pietcher has been elected vice-president for marketing and also at Henrish. Inc.

Alex Zakson has been appointed vice-president for software development of Harris Corp's distributed data processing division.
 Mark L. Seigel has been ap-

New

Companies.

The Scott Fetzer Co. of Cleveland has formed Novatech, a firm that will design and manufacture controlled motion systems for the peripherals and robotica markets. The new firm is located at 968 Bradley St., Watertown, N.Y. 13601.

Harvard Software, Inc. is a new company that will offer second-gen-eration productivity software for IBM and IBM-compatible personal computers. It is located in Harvard,

The Mega Group is a new company specializing in the development of mcrocomputer-style software that will operate on main/rame systems. It is located at Suite 100, 2091 Business Center Drive, Irvine, Calif. 92715.

Display Telecommunications Corp. will design. manufacture and market office workstations that inte-grate telephones and personal com-puters. Information can be obtained from the firm at Suite 400, 4100 Spring Valley Road, Dallas, Texas 75724.

pointed executive vice-president and general manager of Televideo Sys-tems, Inc.'s terminal division. • David M. Holland has been apinted vice-pres

roducts group of Datapoint Corp.

• James D. Lynch has been prototed to vice-president of quality as arrance and reliability at Advances

surance and reliability at Advanced Micro Devices, Inc.

• Douglas G. Pearsal has been pointed vice-president, finance, at Mohawk Data Sciences Corp.

• J. Roger Moody has been named president and chief executive officer of U.S. Satellite Systems, Inc.

• Richard E. Bennett and James V. Lester have been elected vice-chairmen of ITT. Also elected to new

ed to corporate vice-presi-easurer, and Philip Russell to

e Joseph V. Charyk has been elected chairman and chief executive officer and Irving Goldstein has been elected president of Communite Com

Ronald T. LeMay has been designated vice-president, external af-airs, for the prospective AT&T orga-nization that will provide long-distance and international ser-

vices following the Bell System di

David M. Holland has been ap-pointed vice-president, sales/sys-ms, for Datapoint Corp.'s office and emputer products group.

Frederick L. Hanson and Dave riedley have been named vice-pres-lents of Tektronix, Inc.

Frank F. Castaldi has been ap-pointed vice-president, finance, in the computer systems operations of sperry Corp.

Lawrence Simon has been appointed vice-president, corporate divelopment and acquisitions, an Howard Wohl has been appointe vice-president and chief financial oficer at Monchik-Weber Corp.

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